User's Guide

TRENDnet®

Outdoor PoE Megapixel Day/Night Internet Camera

TV-IP322P

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Product Overview

TV-IP322P

Package Contents

- TV-IP322P
- Quick Installation Guide
- CD-ROM (Utility &User's Guide)
- GPIO Connector (2 pcs)
- Spiral Cable Wrap
- Network cable (1.5m / 5ft)
- Desiccant*
- Power adapter (12V DC, 1.5A)
- Camera mounting kit**

Note: If any package contents are missing or damaged, please contact the retail store, online retailer, or reseller/distributor that the item was purchased.

* The camera provides two packs of desiccant: one pack is pre-installed inside the camera compartment before shipment; the extra pack is provided for replacement while you open the back cover in the future.

** The provided screws included: (a) screws and washers for assembling the camera shield; (b) expansion screws for mounting the camera to the wall.

Features

The SecurView Pro Outdoor PoE Megapixel Day/Night Internet Camera, model TV-IP322P, provides powerful Megapixel night vision in complete darkness for up to 20 meters (66 feet).

This camera is outdoor installation ready with an IP66 rated weather proof and vandal proof outdoor enclosure. No need to install this camera near a power source, power and data are received through a single Ethernet cable using Power over Ethernet (PoE) technology.

Record 1280 x 1024 pixel (SXGA) H.264 video at up to 15 frames per second (fps) or 640 x 480 pixel (VGA) resolution at up to 30 fps. Manage up to 32 TRENDnet cameras with the included complimentary camera management software. Advanced features include motion detection recording, email alerts, scheduled recording sessions, H.264/MPEG-4 image compression, 3GPP support, Samba client support, Input/Output ports to network to alarm systems, date-and-time and other text overlays, mask overlays to conceal sensitive areas, and digital zoom. A wall/ceiling mounting kit is included and a sun visor shields the camera from direct sunlight.

* TRENDnet's Mobile APP supports iPhone®, iPad®, iPod® Touch and Android. Search for SecurView Mobile from iTunes® or Google Play™. For future updates, please check www.trendnet.com/App for details.

** Monitoring multiple cameras may required a high performance CPU

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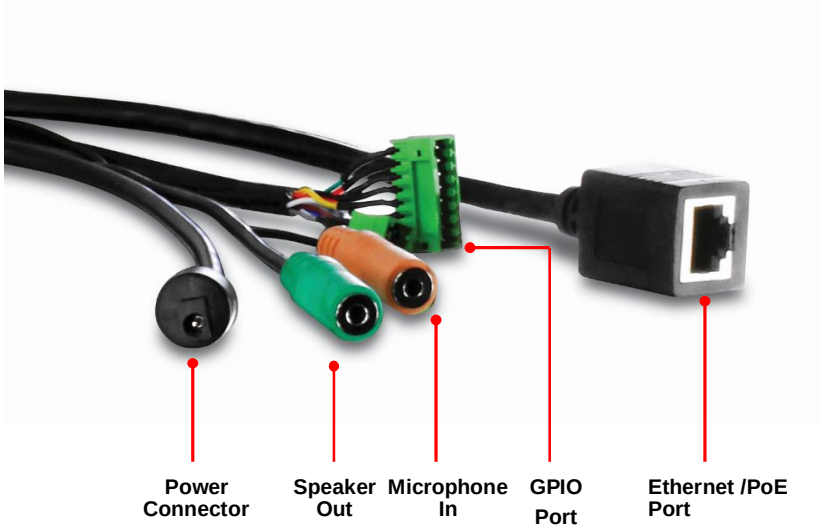
Product Hardware Features

Camera Overview

- **Shield:** It is used to protect the camera for the inclement weather. **Several** screw holes positions on the shield allows user to the shield forward/backward for the need.
- **Lens**: There are four IR lens for this camera.
- **Camera Stand**: the mounting stand to hold the camera.

Camera Connectors



- **Power:** Connects the power adapter to supply power to the camera.
- **Speaker Out:** Connects an external audio device (such as the active speaker) to deliver sound via the camera.
- **Microphone In:** Connects an external microphone to receive the on-the-spot sound where the camera is installed.
- **GPIO Port:** Connects the external device that features additional controlling function, such as motion detection, event triggering, alarm notification, and a variety of external control functions.

  NOTE: Connected the external GPIO adapters before connecting to the external device to GPIO port.
- **Ethernet/PoE Port:** Plugs the provided network cable to connect to your local area network (LAN). If you are using the PoE, you must have the network cable connect to your PoE switch or PoE Injector.

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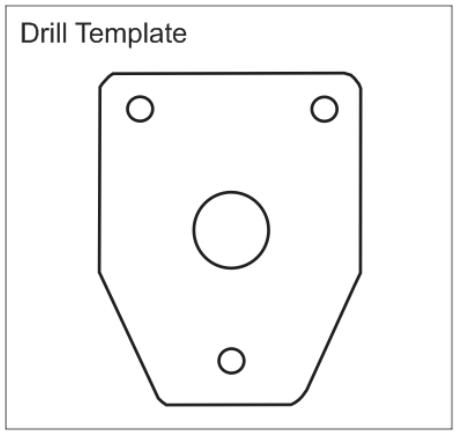
Application Diagram

Installation

Hardware Installation

1. Use the included drill template to drill three mounting holes on the desire location and hammer the plastic anchors into the holes.



2. Secured the provided screws to the camera.

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3. Assemble the sun visor to the camera by using the provided screws and washers.

4. Assemble the camera mounting bracket to the camera by using the provided screws and washers.

5. Align the mounting bracket to the anchors that you hammer on step 1, and then use the provided screws to secure it. Secure the camera to the mounting bracket.

6. Adjust the swivel ball on the mounting bracket to desired position.

7. The camera hardware installation is now completed.

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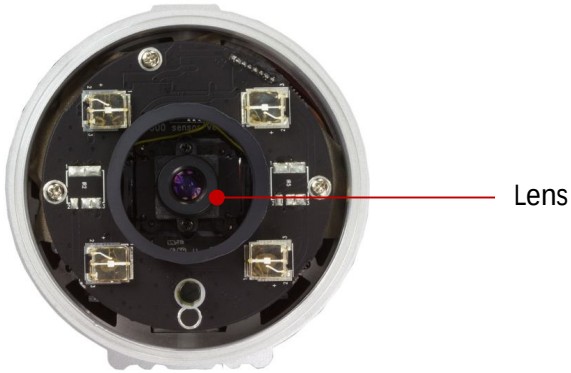
Hardware Feature

Camera Focus:

Open the front cover and adjust the lens focus by turning the lens ring slowly in either clockwise or counter clockwise direction.

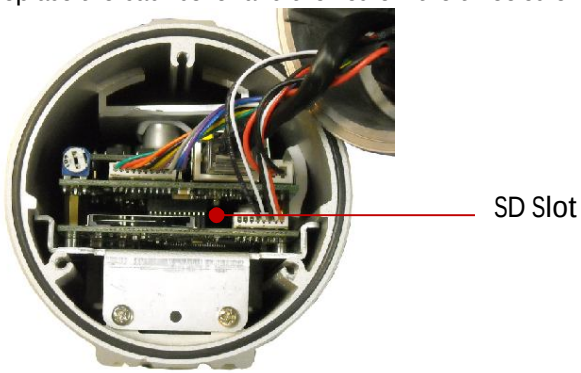


SD Card Slot

The camera provides a SD card slot that allows you to install the memory card (not included in the package) to store files.

To install the memory card:

1. Remove the back cover of the camera by unscrewing the three screws.
2. Locate the SD card slot inside the camera, and then insert the memory card into the slot.
3. Replace the back cover and then screw the three screws.



Waterproofing

The camera is designed featuring waterproof. However, you need to protect the connectors from water soak. For example, you can tape the junction points of the connectors while you connect the cables or purchase a weatherproof cable/power cord protector.

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Camera Installation

1. Insert the Installation CD-ROM into your computer's CD-ROM drive to initiate the Auto-Run program.

2. Click the **Install Camera.**

3. Write down the MAC address of your camera.

4. If using PoE, please skip to the next step. For non-PoE user, please plug and connect the power adapter to the camera. Please wait for 60 seconds for the camera to boot up.

TRENDnet | TV-IP322P
Power up the camera
If using PoE to supply power to the camera, please skip to the next step.
Plug in and connect the power adapter to the camera. Allow 60 seconds for the camera to boot up .
Home
Back
Next

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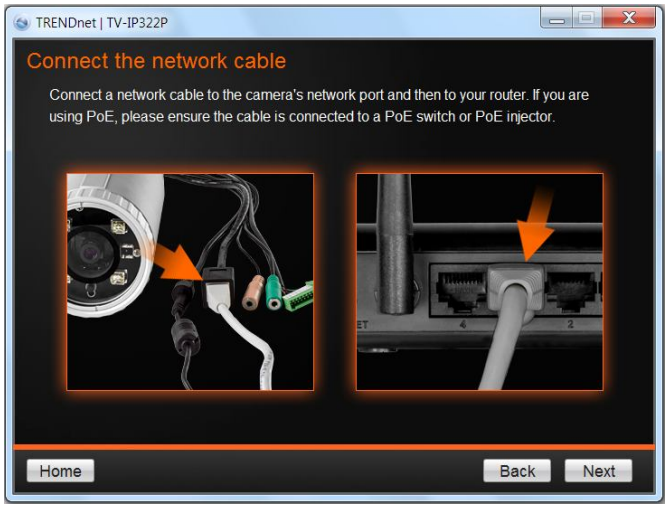
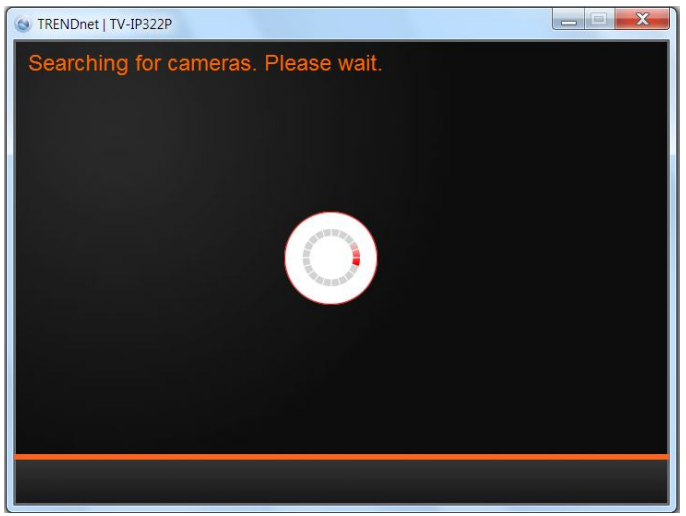
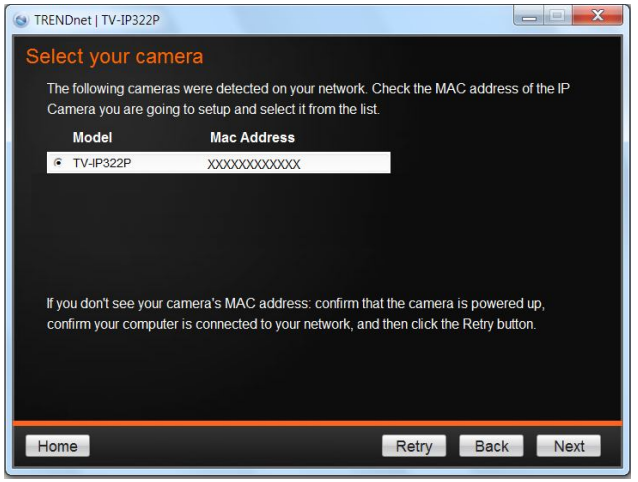
5. Connect a network cable to the camera's network port and then to your network. If you are using PoE, please ensure the cable is connected to a PoE switch or PoE injector.


TRENDnet | TV-IP322P
Connect the network cable
Connect a network cable to the camera's network port and then to your router. If you are using PoE, please ensure the cable is connected to a PoE switch or PoE injector.
Home
Back
Next

6. Wait while camera is searching.



7. The founded cameras will show on the screen. The camera already selected by default if you have only one camera installed. If you have more than one camera in the same Network, you will need to identify the camera by the MAC address.


TRENDnet | TV-IP322P
Select your camera
The following cameras were detected on your network. Check the MAC address of the IP Camera you are going to setup and select it from the list.
Model
Mac Address
TV-IP322P
XXXXXXXXXXX
If you don't see your camera's MAC address: confirm that the camera is powered up, confirm your computer is connected to your network, and then click the Retry button.
Home
Retry
Back
Next

8. Type in the Password. The password is "admin" by default. We strongly suggested changing the camera's password. The **Change Password** option is enable by default.

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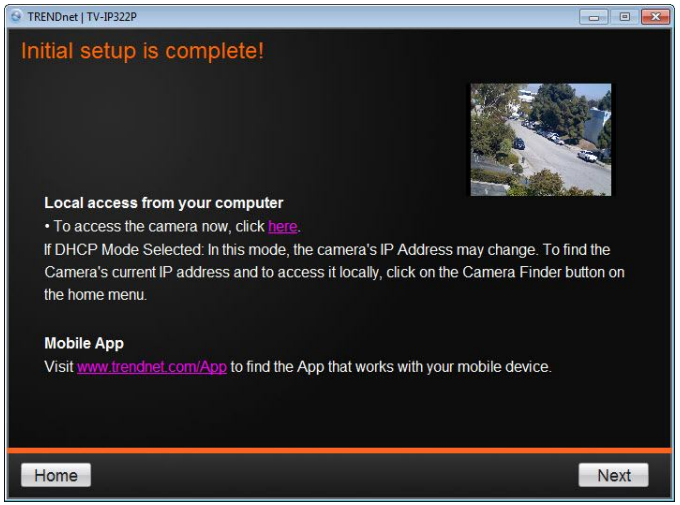
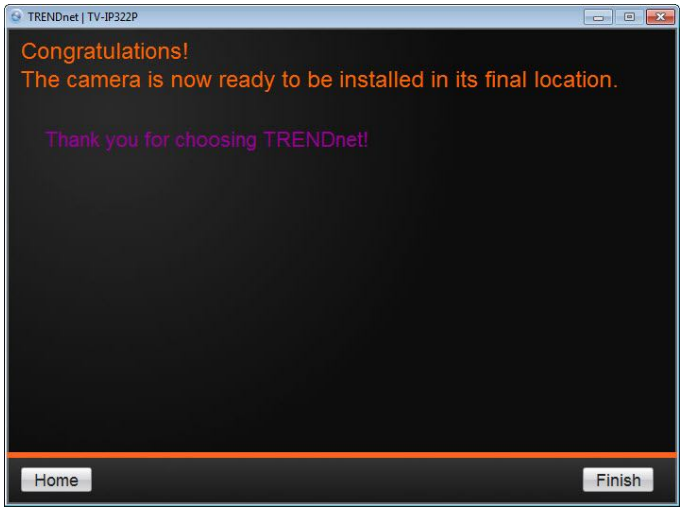
9. Click **here** on the screen to access the camera now or click **Next** button for later accessing. If you will access the camera later and the DHCP mode was selected, you will need to run Camera Finder (IPSetup) utility as described in next section.


TRENDnet | TV-IP322P
Initial setup is complete!
Local access from your computer
• To access the camera now, click here.
If DHCP Mode Selected: In this mode, the camera's IP Address may change. To find the Camera's current IP address and to access it locally, click on the Camera Finder button on the home menu.
Mobile App
Visit www.trendnet.com/App to find the App that works with your mobile device.
Home
Next

10. Click **Finish** to exit the program or click **Home** return to the main screen.



Starting Camera Finder (IPSetup)

The camera comes with a conveniently utility, IPSetup, which is included in the Installation CD-ROM, allowing you to search the camera on your network easily.

1. Insert the Installation CD-ROM into your computer's CD-ROM drive to initiate the Auto-Run program. Click the **Camera Finder** (**IPSetup** from the Auto-Run menu screen.

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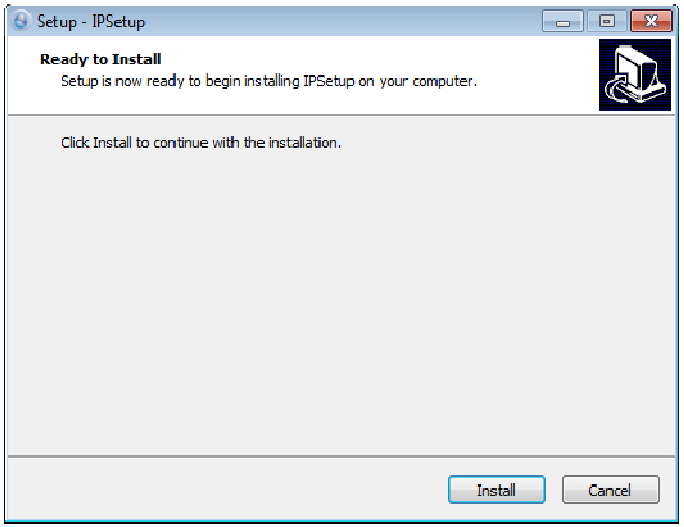
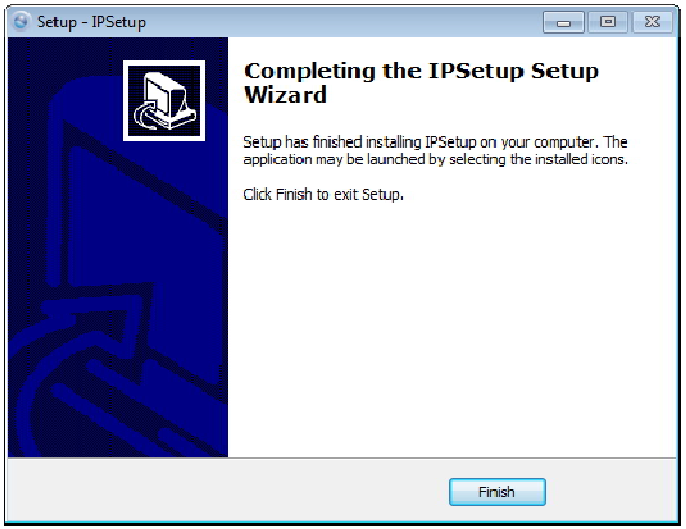
2. Click **Install**

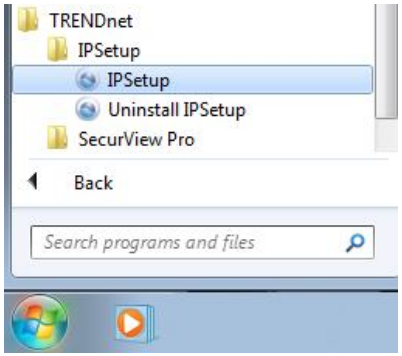

Setup - IPSetup
Ready to Install
Setup is now ready to begin installing IPSetup on your computer.
Click Install to continue with the installation.
Install
Cancel

3. Click **Finish**.

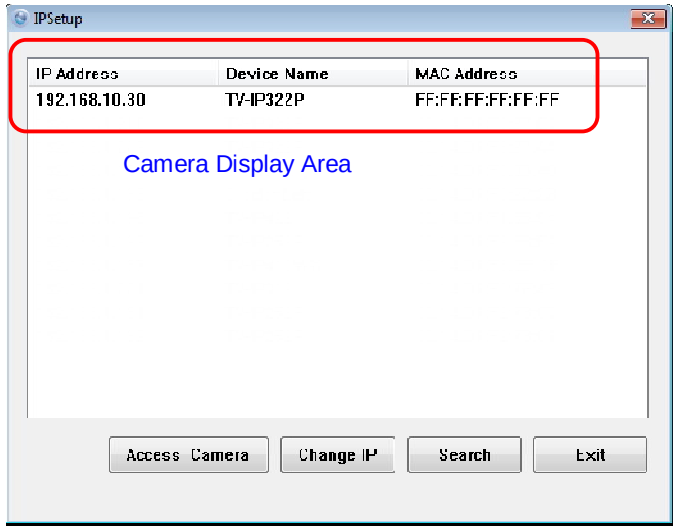

Setup - IPSetup
Completing the IPSetup Setup Wizard
Setup has finished installing IPSetup on your computer. The application may be launched by selecting the installed icons.
Click Finish to exit Setup.
Finish

4. After installing the IPSetup utility, the application is installed to your computer, and creates a folder in **Start\Program\TRENDnet\IPSetup**.

5. Click **Start**>**Programs**>**TRENDnet**>**IPSetup**, and then click **IPSetup**.



6. The **IPSetup** window will appear. It will search for the cameras within the same network.



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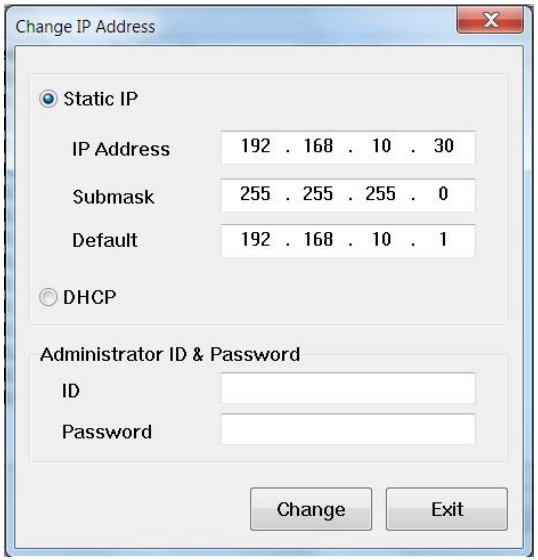
- **Camera Display Area:** By default, the IP setting on the Camera is set to DHCP. If you have DHCP server, the camera will automatic get the IP address from DHCP server. If you do not have DHCP server on your network, it will show the default IP as 192.168.10.30. Double click the IP address; it will link to camera's web configuration page.

- **Access Camera:** Click this button to go to camera's web configuration page.
- **Change IP:** Click this button to bring up the following window. It allows you to change the IP Address. You can select either **Static IP** or click **DHCP**. Then, enter the Administrator ID & Password. By default the ID/Password is: **admin**. When complete, click **Change**.

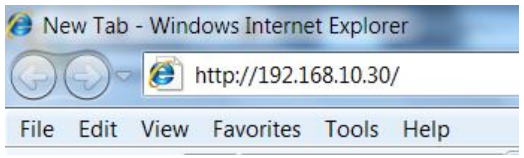


- **Search:** Click this button to search the connected cameras in the same network
- **Exit:** Click this button to exit the program.

Configuration

Viewing Camera Basic Function

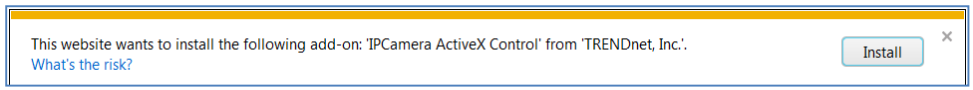
Open the Web browser on your computer (example showed in the User's Guide is based on the Internet Explorer). Type the default IP address (192.168.10.30) or the IP address found by IPSetup in the Address bar, and then press **Enter**.



When the login window appears, enter the default **User name** (admin) and **Password** (admin) and press **OK** to access to the main screen of the camera's Web Configuration.

Windows Security
The server 192.168.10.30 at netcam requires a username and password.
Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).
User name
Password
Remember my credentials
OK
Cancel

NOTE: If you are initially access to the camera, you will be ask to install a new plug-in for the camera. Permission request depends on the Internet security settings of your computer. Click **Install** or **Yes** to proceed.



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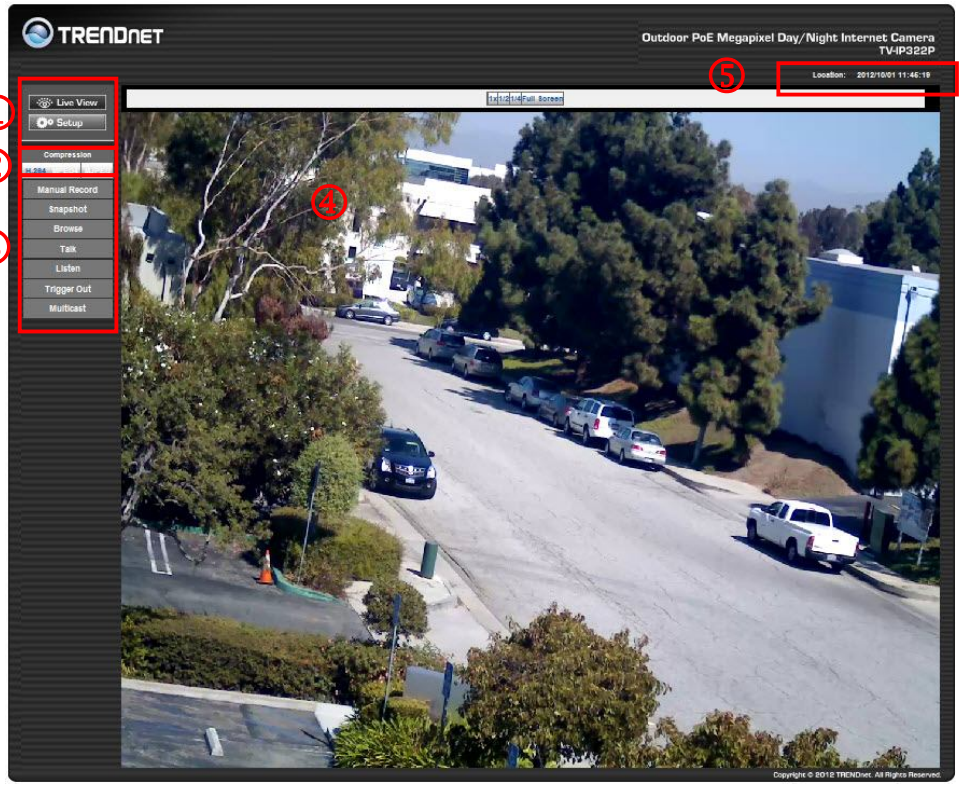
After you login into the Web Configuration of the camera, the main page will appear as below:



The Main screen of the Web Configuration provides you with many useful information and functions, including:

1 Live View/Setup Switch:

- Click the Live View button to configure the camera.
- Click the Setup button to return to the Main screen to view the live view image.

2 Compression Buttons: Select to transmit and record the video using H.264, MPEG4, or MJPEG compression.

3 Function Buttons:

- **Manual Record** allows you manually record and save a video clip*.
- **Snapshot** allows you to capture and save a still image*.
- **Browse** allows you to assign the destination folder to store the video clips and still images*.
- **Talk** allows you to speak out through the camera. Please note only one user is allowed to use this function at a time.
- **Listen** allows you to receive the on-site sound and voice from the camera.
- **Multicast** allows you to change the camera's transmission type on multicast.

4 Live View: The Live View Image window displays the real-time image of the connected camera.

- The current compression mode of image is displayed above the Live View Image window.
- Click the **Zoom In** buttons (1x 1/2 1/4 Full Screen for SXGA) or (1x 2x 3x for VGA/QVGA/QQVGA/720p) above the Live View Image window to zoom in the live view image by 1x, 2x, 3x, 1/2, 1/4, or full screen

5 Camera Information: Displays the camera's location and the current date & time. The information can be modified in the Web Configuration.

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* If you are using Microsoft 7/Vista platform, you may not be able to find the recorded files by **Snapshot** or **Manual Record**. You will need to disable the protected mode of Security in the IE browser before recording a video file or taking a snapshot.

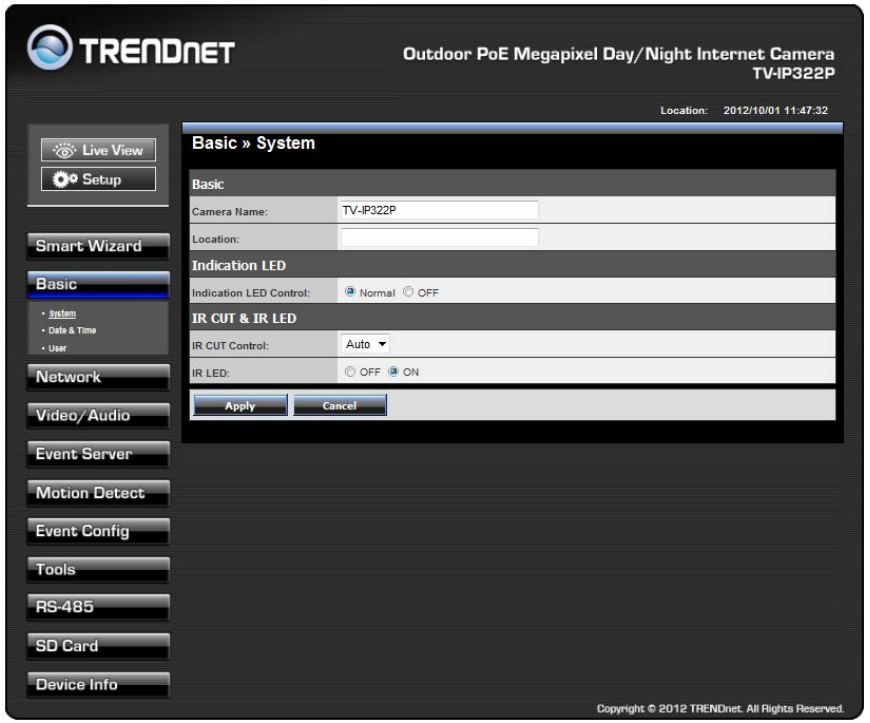
  Please follow the below steps:

  1. Open IE Browser
  2. Select **Tools→Internet Options**
  3. Select **Security**
  4. Uncheck the "**Enable Protected Mode**" then press **OK**

Configuring the Camera Setting

To configure the camera, click

on the Main screen of Web Configuration. The Web Configuration will start from the **Basic** page.



The Web Configuration contains the settings that are required for the camera in the left menu bar, including **Smart Wizard**, **Basic**, **Network**, **Video/Audio**, **Event Server**, **Motion Detect**, **Event Config**, **Tools**, **RS-485, SD Card**, and **Device Info**.

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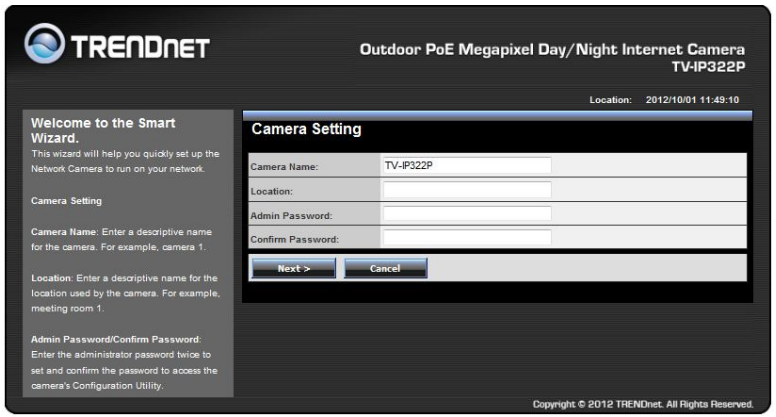
Smart Wizard

The camera's Smart Wizard lets you configure your camera easily and quickly. The wizard will guide you through the necessary settings with detailed instructions on each step.

To start the wizard, click **Smart Wizard** in the left menu bar.

- **Camera Setting**

  By default, the camera name is set as model number. Change the name if necessary. Enter the location and administrator password twice.


TRENDnet
Outdoor PoE Megapixel Day/Night Internet Camera
TV-IP322P
Location: 2012/10/01 11:49:10
Welcome to the Smart Wizard.
This wizard will help you quickly set up the Network Camera to run on your network.
Camera Setting
Camera Name: Enter a descriptive name for the camera. For example, camera 1.
Location: Enter a descriptive name for the location used by the camera. For example, meeting room 1.
Admin Password/Confirm Password: Enter the administrator password twice to set and confirm the password to access the camera's Configuration Utility.
Camera Setting
Camera Name: TV-IP322P
Location:
Admin Password:
Confirm Password:
Next >
Cancel
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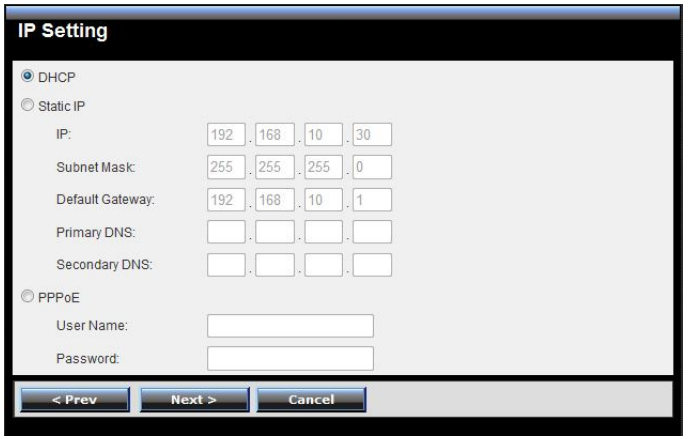
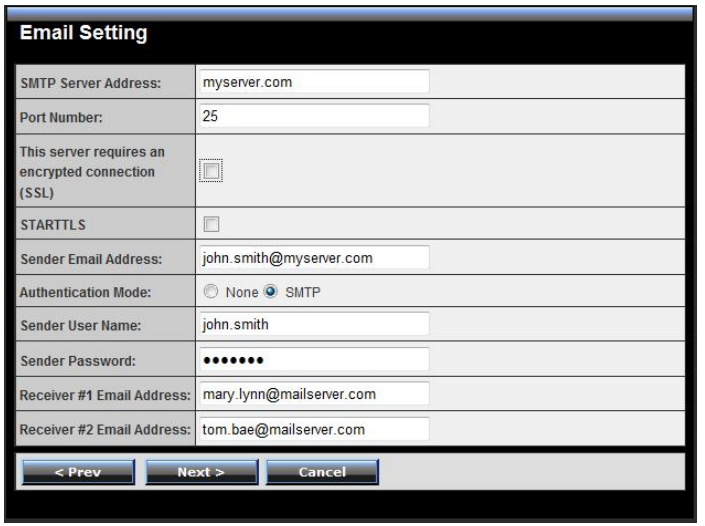
- **IP Setting**

  Select the IP setting according to your network: **DHCP**, **Static IP**, or **PPPoE**.



- **Email Settings**

  Enter the required information to be able to send email with image. For example, myserver.com. If you are using a free mail service (e.g. Google Gmail®, Yahoo®, Hotmail®), please enter the SMTP server address and the corresponding information (SSL and/or STARTTLS) from the service provider.



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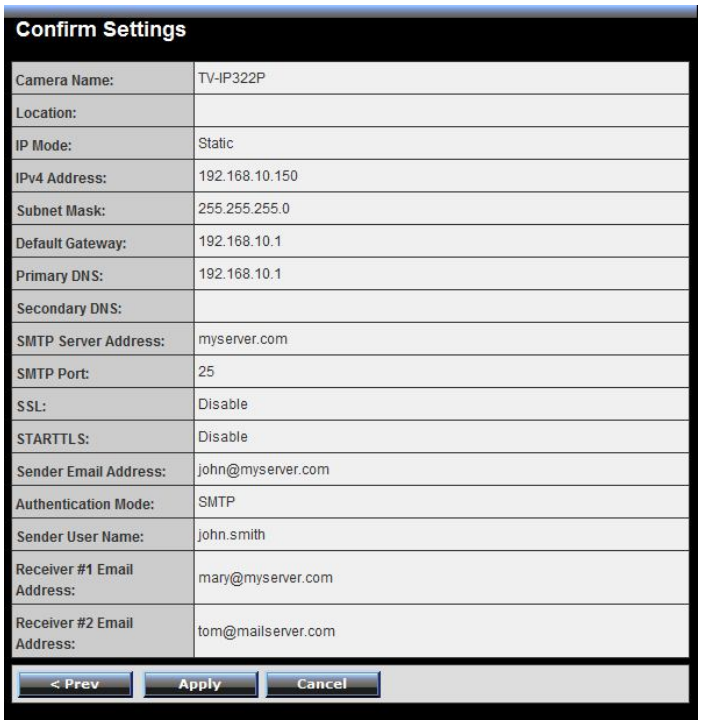
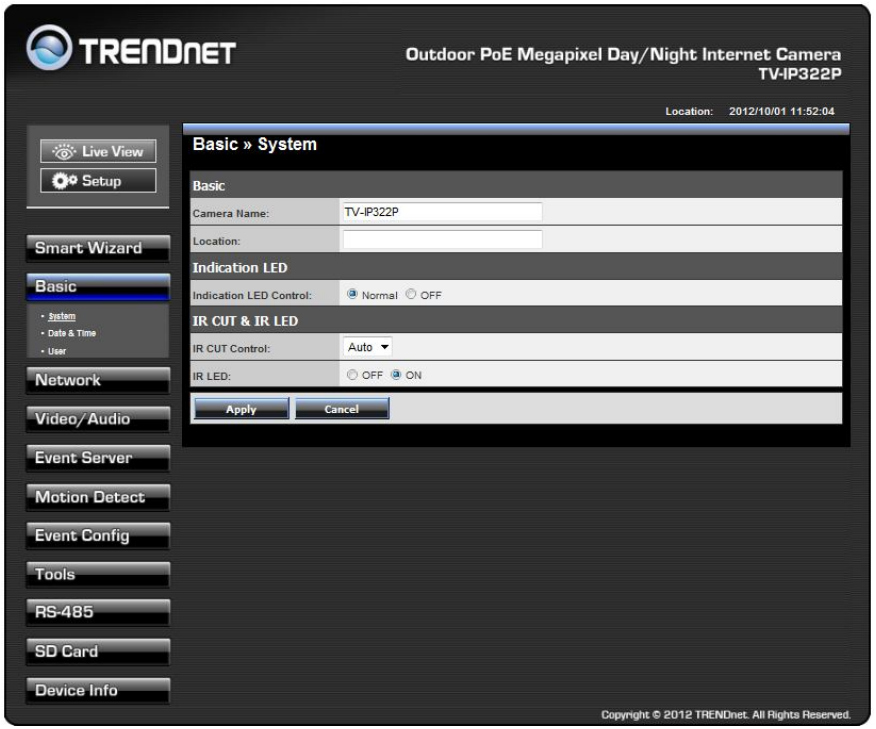
- **Confirm Settings**

  The last step shows the configuration of your camera. When you confirm the settings, click **Apply** to finish the wizard and reboot the camera. Otherwise, click **Prev** to go back to the previous step(s) and change the settings; or click **Cancel** to end the wizard and discard the changes.



Basic

The Basic menu contains three sub-menus that provide the system settings for the camera, such as the Camera Name, Location, Date & Time, and User management.



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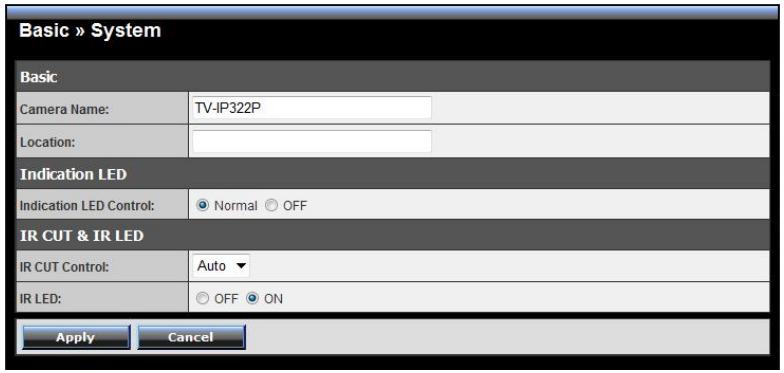
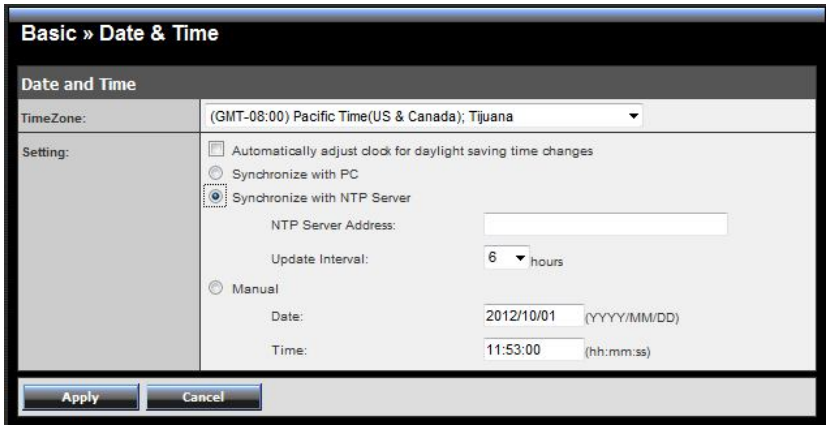
Basic >> System



- **Basic:** This item allows you to assign the camera name and location information.
  - **Camera Name:** Enter a descriptive name for the camera, which is helpful to identify the camera easily while multiple cameras are connected within the network.
  - **Location:** Enter a descriptive name for the location where is monitored by the camera.
  - **Language Default:** Select the displayed language as default.
- **Indication LED:** This item allows you to set the LED illumination as desired. There are two options: **Normal** and **OFF**.
- **IR CUT & IR LED:** The camera features ICR function (IR CUT Filter) and IR LED, allowing you to capture clear image when environment light changed.
  - **IR CUT Control:** Set the ICR function (IR CUT filter) for the camera: **Auto** mode or **Off** mode.

    In Auto mode, the lens filter will be switched automatically to capture black and white image when the change of environment light is detected by the camera's light sensor.
  - **IR LED:** Enable or disable the camera's IR LED manually by selecting **ON** or **OFF**.

Basic >> Date & Time



- **Date & Time:** Enter the correct date and time for the system.
  - **TimeZone:** Select the proper time zone for the region from the pull-down menu.
  - **Automatically adjust clock for daylight saving time changes:** select this option for daylight saving
  - **Synchronize with PC:** Select this option and the date & time settings of the camera will be synchronized with the connected computer.
  - **Synchronize with NTP Server:** Select this option and the time will be synchronized with the NTP Server. You need to enter the IP address of the server and select the update interval in the following two boxes.
  - **Manual:** Select this option to set the **Date** and **Time** manually.

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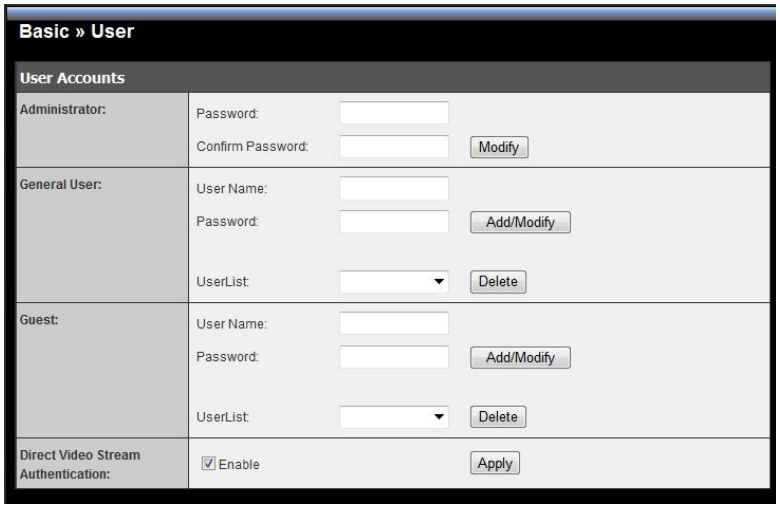
Basic >> User



- **Administrator:** To prevent unauthorized access to the camera's Web Configuration, you are strongly recommend to change the default administrator password. Type the administrator password twice to set and confirm the password.
- **General User**
  - **User Name:** Enter the user's name you want to add to use the camera.
  - **Password:** Enter the password for the new user. When you are finished, click **Add/Modify** to add the new user to the camera. To modify the user's information, select the one you want to modify from **UserList** and click **Add/Modify**.
  - **UserList:** Display the existing users of the camera. To delete a user, select the one you want to delete and click **Delete**.
- **Guest**
  - **User Name:** Enter the guest's name you want to add to use the camera.
  - **Password:** Enter the password for the new guest.
  - **UserList:** Display the existing guests of the camera. To delete a user, select the one you want to delete and click **Delete**.

NOTE: The "General User" is allowed to access the camera and control the Function buttons on the Main screen of the Web Configuration.; the "Guest" can only view the live view image from the Main screen while accessing the camera. Only the "Administrator" is allowed to configure the camera through the Web Configuration.

- **Direct Video Stream Authentication**:

  To steam the video directly without going through the configuration page, you can access it via Internet.
  - **Enable:** User needs to enter user name and password to stream the camera.
  - **Disable**: User can stream the camera without entering the user name and password.

  Examples of the direct link to video:
  H.264 Mode
  http://camera_ip_address:port number/h264view.htm

  MPEG4 Mode
  http://camera_ip_address:port number/mpgview.htm

  MJPEG Mode
  http://camera_ip_address:port number/jpgview.htm

NOTE: This feature is enabled by default, and for security reason, it is recommended to have the feature enabled at all time.

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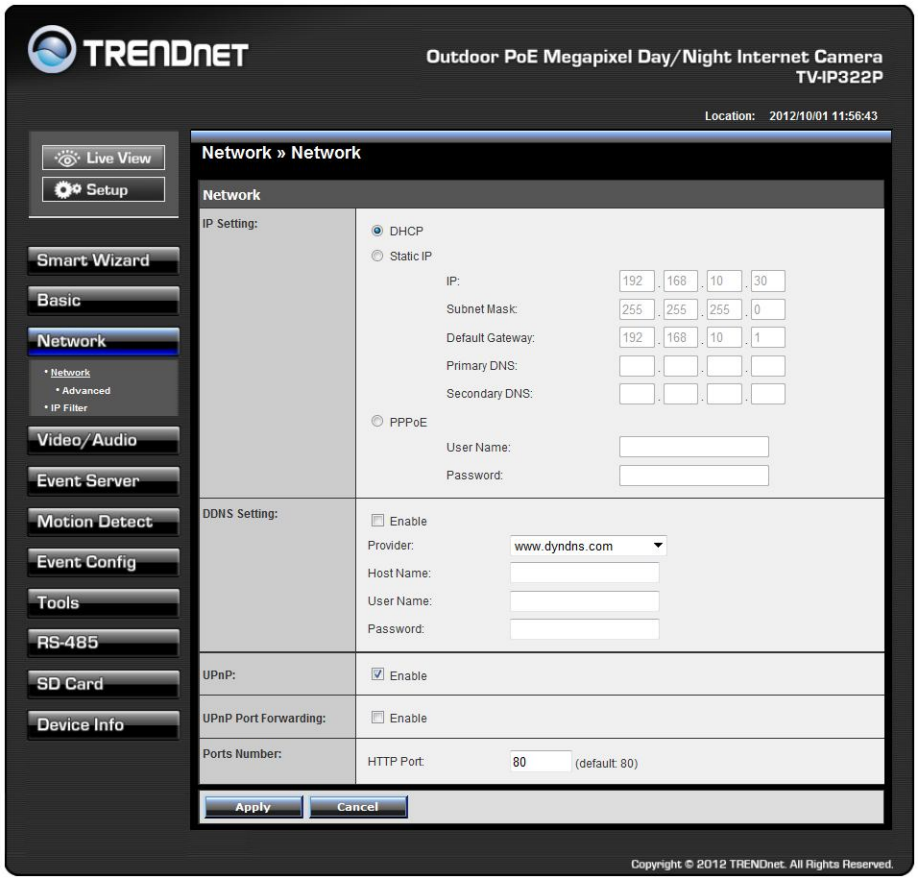
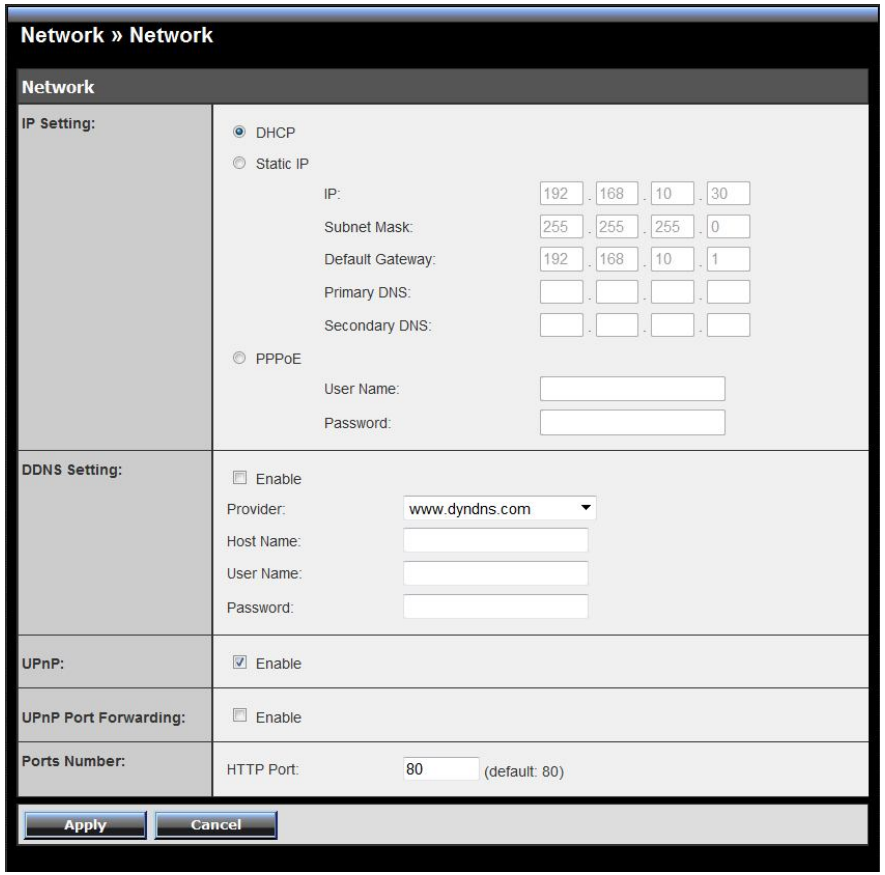
Network

The Network menu contains two sub-menus that provide the networking settings for the camera, such as the IP Setting, DDNS Setting, and IP Filter.



Network >> Network



- **IP Setting:** This item allows you to select the IP address mode and set up the related configuration.
  - **DHCP:** Select this option when your network uses the DHCP server. When the camera starts up, it will be assigned an IP address from the DHCP server automatically. This is the default IP setting on the camera.
  - **Static IP:** Select this option to assign the IP address for the camera directly. You can use IP Setup to obtain the related setting values.

IP	Enter the IP address of the camera. The default setting is 192.168.10.30.

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Subnet Mask	Enter the Subnet Mask of the camera. The default setting is 255.255.255.0.
Default Gateway	Enter the Default Gateway of the camera. The default setting is 192.168.10.1.
Primary/ Secondary DNS	DNS (Domain Name System) translates domain names into IP addresses. Enter the Primary DNS and Secondary DNS that are provided by ISP.

- **PPPoE:** Select this option when you use a direct connection via the ADSL modem. You should have a PPPoE account from your Internet service provider. Enter the **User Name** and **Password**. The camera will get an IP address from the ISP as starting up.

NOTE: Once the camera get an IP address from the ISP as starting up, it automatically sends a notification email to you. Therefore, when you select PPPoE as your connecting type, you have to set up the email or DDNS configuration in advance.

- **DDNS Setting:** With the Dynamic DNS feature, you can assign a fixed host and domain name to a dynamic Internet IP address. To set up the DDNS:

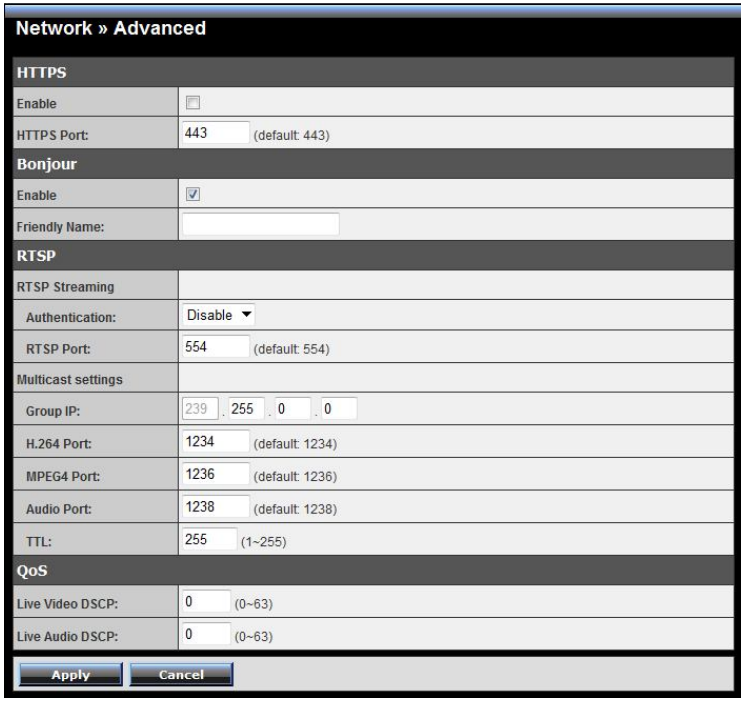
  1. Select the **Enable** option to enable this feature.
  2. Select the **Provider** from the pull-down list.
  3. Enter the required information in the **Host Name**, **User Name**, and **Password** boxes.

NOTE: You have to sign up for DDNS service with the service provider before configuring this feature.

- **UPnP:** The camera supports UPnP (Universal Plug and Play), which is a set of computer network protocols that enable the device-to-device interoperability. In addition, it supports port auto mapping function so that you can access the camera if it is behind an NAT router or firewall. Select the **Enable** option to enable this feature.
- **UPnP Port Forwarding:** select this option to have the port forward to router.
- **Ports Number**
  - **HTTP Port:** The default HTTP port is **80**.

NOTE: If the camera is behind an NAT router of firewall, the suggested to be used is from 1024 to 65535.

Network >> Advanced



- **HTTPS**
  - **Enable:** Select this option to enable HTTPS, which is a secure protocol to provide authenticated and encrypted communication within your network.
  - **HTTPS Port:** Assign a HTTPS port in the text box. The default HTTPS port is **443**.
- **Bonjour:** The devices with Bonjour will automatically broadcast their own services and listen for services being offered for the use of others. If your browser with Bonjour, you can find the camera on your local network without knowing its IP address.

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The Apple Safari is already with Bonjour. You can download the complete Bonjour for Internet Explorer browser from Apple's web site by visiting http://www.apple.com/bonjour/.

- **RTSP**
  - **RTSP Streaming:** The camera supports three levels of RTSP access. The default **RTSP Port** is **554**.

Disable	RTSP link does not require authentication. No username/password required.
Basic	RTSP link prompts for authentication. Username/password are transmitted in plain text.
Digest	RTSP link prompts for authentication. Username/password are encrypted during data transmission.

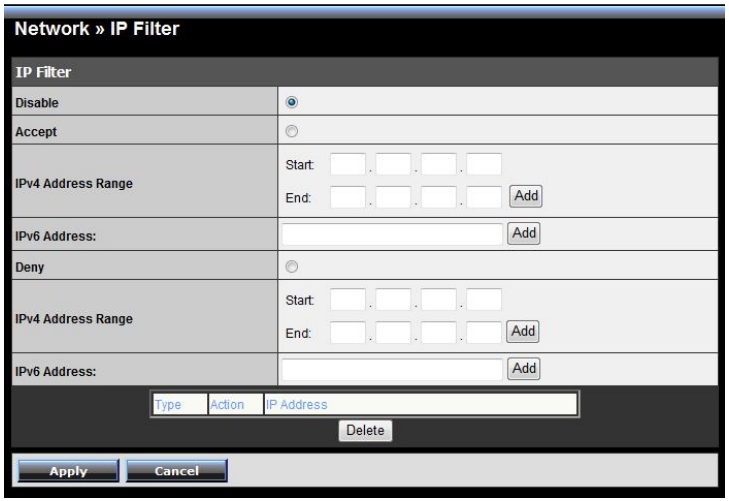
TRENDnet recommends using RTSP Digest authentication method. Disable and basic methods pose security risks. Please verify if your RTSP client supports RTSP authentication method selected.

  - **Multicast settings:** Configure the following settings so that you can deliver information from your camera to a set of receivers.

Group IP	Assign a category of IP addresses to receive the information from the camera.
H.264 Port	Assign a multicast port for H.264 in the text box. The default port is **1234**.
MPEG4 Port	Assign a multicast port for MPEG4 in the text box. The default port is **1236**.
Audio Port	Assign a multicast port for audio in the text box. The default port is **1238**.
TTL	Set the TTL value from 1 to 255, which is used to modify the time to live field in the IP header.

- **QoS**
  - **Live Video DSCP:** Assign the DSCP (DiffServ Code Point) of the stream video from the camera.
  - **Live Audio DSCP:** Assign the DSCP (DiffServ Code Point) of the stream audio from the camera.

Network >> IP Filter



The IP Filter setting allows the administrator of the camera to limit the users within a certain range of IP addresses to access the camera.

To disable this feature, select the **Disable** option; otherwise, select the **Accept** option to assign the range of IP addresses that are allowed to access the camera, or select the **Deny** option to assign the range of IP addresses that are blocked to access the camera.

- **Disable:** Select this option to disable the IP Filter function of the camera.
- **Accept**
  - **IPv4:** Assign a range of IP addresses that are allowed to access the camera by entering the **Start IP address** and **End IP address** options. When you are finished, click **Add** to save the range setting. You can repeat the action to assign multiple ranges for the camera.

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For example, when you enter 192.168.0.50 in Start IP Address and 192.168.0.80 in End IP Address, the user whose IP address located within 192.168.0.50 ~ 192.168.0.80 will be allowed to access the camera.

- **IPv6:** Enter the **IP Address** that is allowed to access the camera.

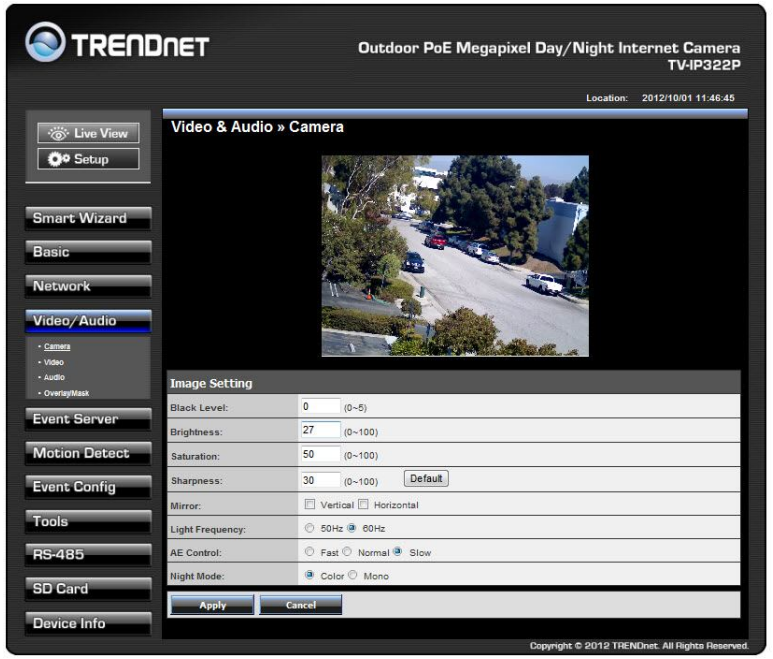
- **Deny**
  - **IPv4:** Assign a range of IP addresses that are blocked to access the camera by entering the **Start IP address** and **End IP address** options. When you are finished, click **Add** to save the range setting. You can repeat the action to assign multiple ranges for the camera.

    For example, when you enter 192.168.0.50 in Start IP Address and 192.168.0.80 in End IP Address, the user whose IP address located within 192.168.0.50 ~ 192.168.0.80 will not be allowed to access the camera.

  - **IPv6:** Enter the **IP Address** that is not allowed to access the camera.

Video & Audio

The Video & Audio menu contains four sub-menus that provide the video and audio settings for the camera.



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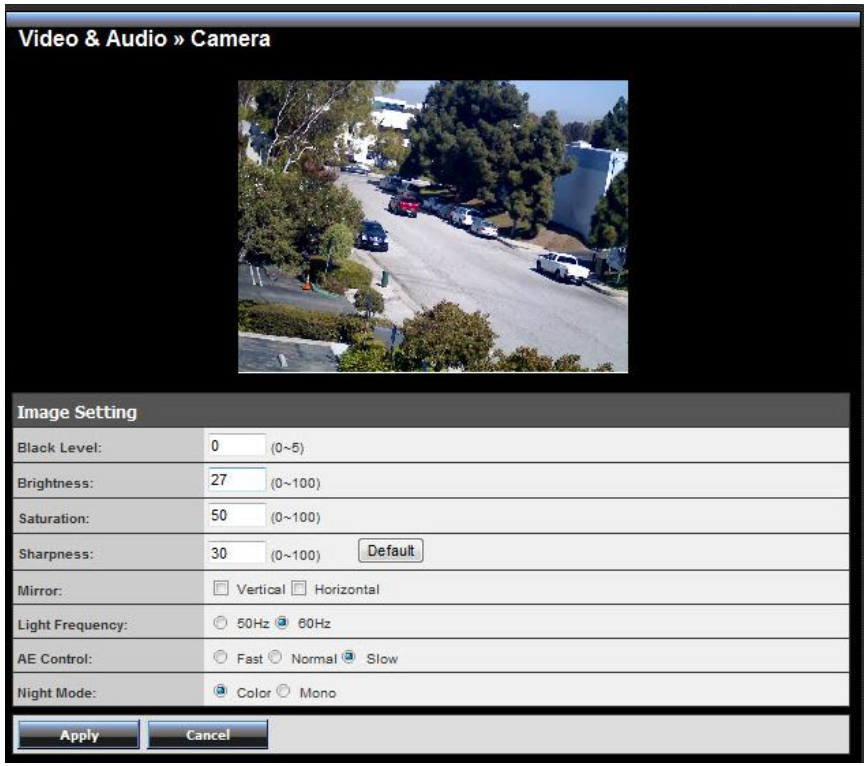
Video & Audio >> Camera



- **Image Setting**
  - **Black Level:** Adjust the brightness level from 0 ~ 5.
  - **Brightness:** Adjust the brightness level from 0 ~ 100.
  - **Saturation:** Adjust the colors level from 0 ~ 100.
  - **Sharpness:** Adjust the sharpness level from 0 ~ 100.

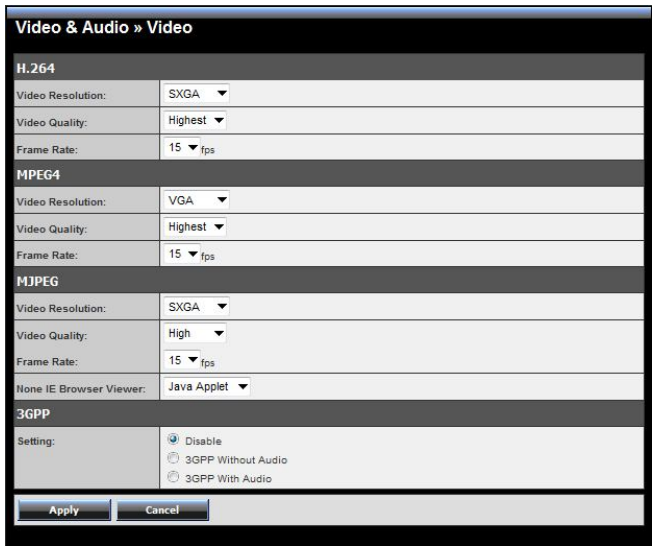
TIP Click **Default** to restore the default settings of the three options above.

- **Mirror:** Select **Vertical** to mirror the image vertically, or select **Horizontal** to mirror the image horizontally.
- **Light Frequency:** Select the proper frequency according to the camera's location to reduce the noise: **50Hz** or **60Hz**.
- **AE Control:** Select AE (Auto Exposure) speed as **Fast**, **Normal** or **Slow**.

Mode	Frequency	AE Control (Day Time) min. shutter speed			AE Control (Night Time) min. shutter speed		
		Fast	Normal	Slow	Fast	Normal	Slow
VGA	60Hz	1/120s	1/60s	1/30s	1/120s	1/60s	1/30s
	50Hz	1/100s	1/50s	1/25s	1/100s	1/50s	1/25s
SXGA	60Hz	1/120s	1/60s	1/15s	1/120s	1/60s	1/15s
	50Hz	1/100s	1/50s	1/12.5s	1/100s	1/50s	1/12.5s

- **Night Mode:** Choose either **Color** or **Mono** for the night mode option. If it is in a low lux environment and must viewing image in color, please select Color with IR off to prevent the color distortion. If the environment is completed dark, please select **Mono** with IR on.

Video & Audio >> Video



- **H.264**
  - **Video Resolution:** Select the desired video resolution from the four formats: **SXGA**, **VGA**, **QVGA** and **QQVGA**. The higher setting (VGA) obtains better video quality while it uses more resource within your network.

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- **Video Quality:** Select the desired image quality from five levels: **Lowest**, **Low**, **Medium**, **High**, and **Highest**.
- **Frame Rate:** Select **Auto** or a proper setting depending on your network status.

- **MPEG4**
  - **Video Resolution:** Select the desired video resolution from the three formats: **VGA**, **QVGA** and **QQVGA**. The higher setting (VGA) obtains better video quality while it uses more resource within your network.
  - **Video Quality:** Select the desired image quality from five levels: **Lowest**, **Low**, **Medium**, **High**, and **Highest**.
  - **Frame Rate:** Select **Auto** or a proper setting depending on your network status.
- **MJPEG**
  - **Video Resolution:** Select the desired video resolution from the four formats: **SXGA**, **VGA**, **QVGA** and **QQVGA**. The higher setting (VGA) obtains better video quality while it uses more resource within your network.
  - **Video Quality:** Select the desired image quality from five levels: **Lowest**, **Low**, **Medium**, **High**, and **Highest**.
  - **Frame Rate:** Select **Auto** or a proper setting depending on your network status.

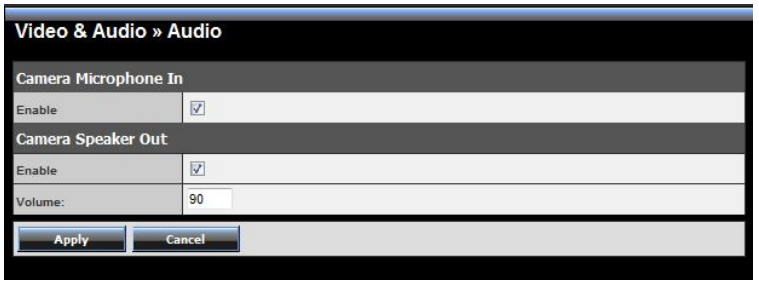
NOTE The camera supports H.264, MPEG4 and MJPEG compression. Please note that that MJPEG mode captures the images in JPEG format, which requires higher bandwidth to view smooth video. You can control the bandwidth of each connection well through the setting options above. For the bandwidth information, refer to the *Appendix, Bandwidth Reference Guide*.

- **3GPP:** The camera supports 3GPP specification. Select the **Disable** option to disable this feature. Otherwise, select **3GPP Without Audio** or **3GPP With Audio** to transfer the video clips without or with audio.

If you use a mobile phone that supports 3GPP, you can also view the real-time streaming image captured by the camera on your phone (with the default player on the phone) by entering the RTSP link: rtsp://(IP address of the camera)/3gp.

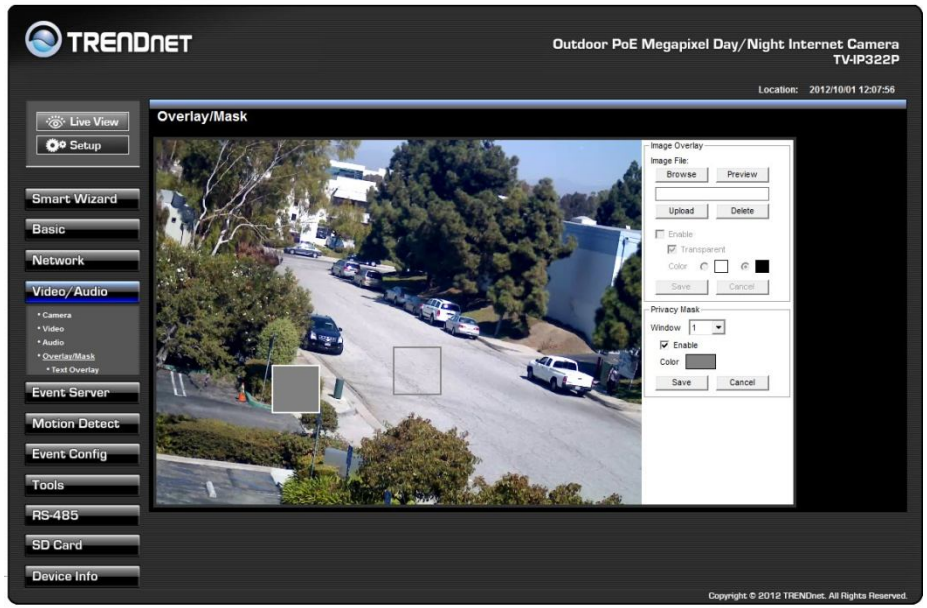
NOTE Your mobile phone and the service provider must support 3GPP function. Please contact your service provider when you are failed to use this service.

Video & Audio >> Audio



- **Camera Microphone In:** Select the **Enable** option to enable the camera's audio function, so that you can receive the on-site sound and voice from the camera.
- **Camera Speaker Out:** Select the **Enable** option to enable the camera's external speaker function, so that the connected speaker can play the sound and voice through the camera. Change the volume by entering the proper value in the **Volume** option. The default setting is **90**.

Video & Audio >> Overlay / Mask



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This sub-menu is used to set the image overlay and mask feature of the camera.

- **Image Overlay:** This item allows you to set the image overlay. In the **Image File** option, click **Browse** to select the image file from your computer, and then click **Upload**. You can click **Preview** to check the image size and adjust the image position before clicking **Upload**. The preview image area is displayed with red dotted line. If you want to remove the preview image before uploading, click **Delete**. Since you click **Upload**, the preview image area is displayed with white dotted line. Click **Enable** and set the transparency setting by whether selecting the **Transparent** option or not. When done, click **Apply**. You can see the image overlay on the live view image when you click **Live View**.

NOTE The width and height of the input overlay graphic should be multiple of 4 at a maximum size of 43690 pixels, and in JPG or BMP (24-bit RGB) format.

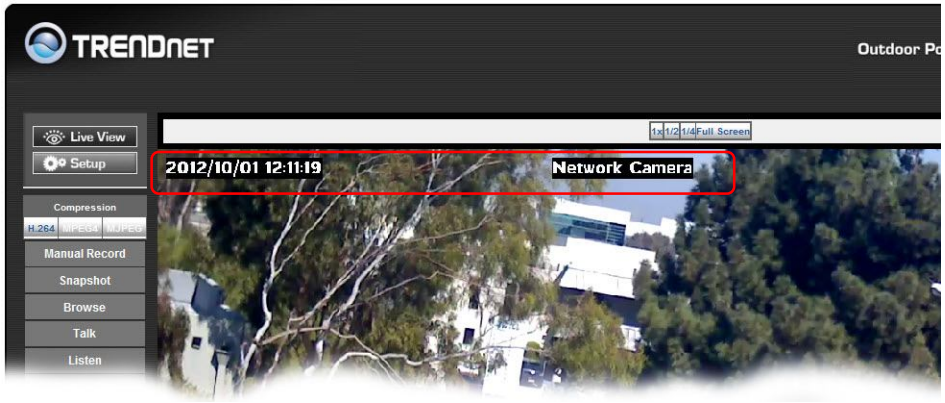
Privacy Mask: This item allows you to configure up to two mask areas. Select the area 1 or 2 from the **Window** pull-down list, and then click **Enable**. You can change the size and position of the area by holding and dragging the mouse. You can also change the color of the mask area by clicking the **Color** box and then selecting the color you want. When done, click **Apply**. You can see the mask area(s) on the live view image when you click **Live View**.

Video & Audio >> Overlay / Mask >> Text Overlay

This page is used to set the text overlay feature of the camera, including the following three options: date & time, heading text, and background transparency setting.

- **Include Date & Time:** Select this option to display the date & time information on the live view image.
- **Include Text:** Select this option and enter your heading text in the box to display the text information on the live view image.
- **Enable Opaque:** Select this option to display the overlay text with a background color.

For example, when you select the **Include Date & Time** and **Include Text** options and click **Apply**, you can see the related information displayed on the live view image when you click the Live View button.



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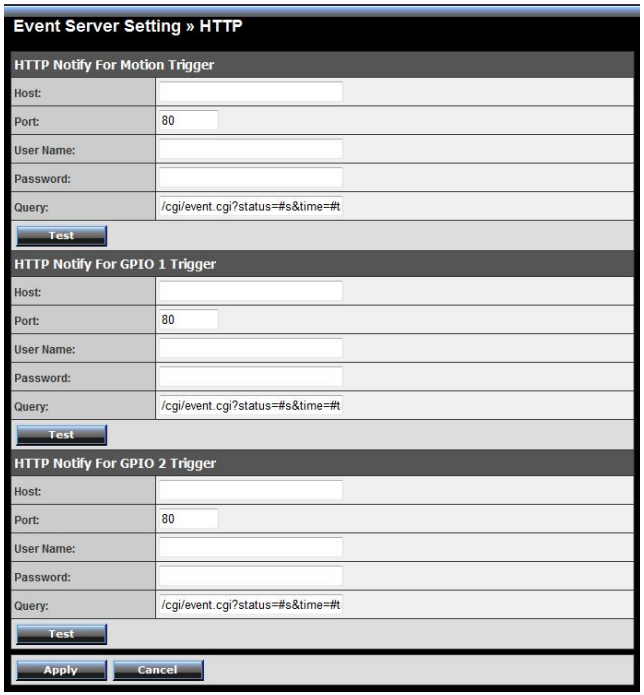
Event Server

The Event Server menu contains four sub-menus that allow you to upload images to FTP, send emails that include still images, and store the images to a NAS system.

When you complete the required settings for HTTP, FTP, Email, or Network Storage, click **Test** to test the related configuration is correct or not. Once the camera connects to the server successfully, click **Apply**.

Event Server Setting >> HTTP



- **HTTP Notify For Motion Trigger**
  Send the query parameter via an HTTP notification when an event is triggered.
  - Host: Enter the IP of the HTTP server
  - Port: Enter the Port number of the HTTP server
  - User Name: Enter the username of the HTTP server
  - Password: Enter the password of the HTTP server
  - Query: Enter the query parameter for the request if necessary

  Example:
  Host: 192.168.10.1 Port: 80
  Query: xxx.cgi?name1=value1&name2=value2
  Ex: cgi/event.cgi?status=#s&time=#t&model=modelname
  Result:
  http://192.168.10.1:80/cgi/event.cgi?status=#s&time=#t&model=modelname

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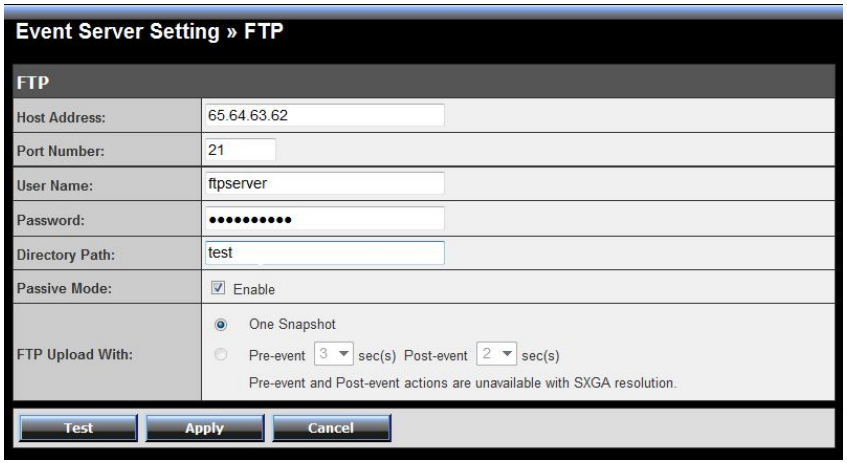
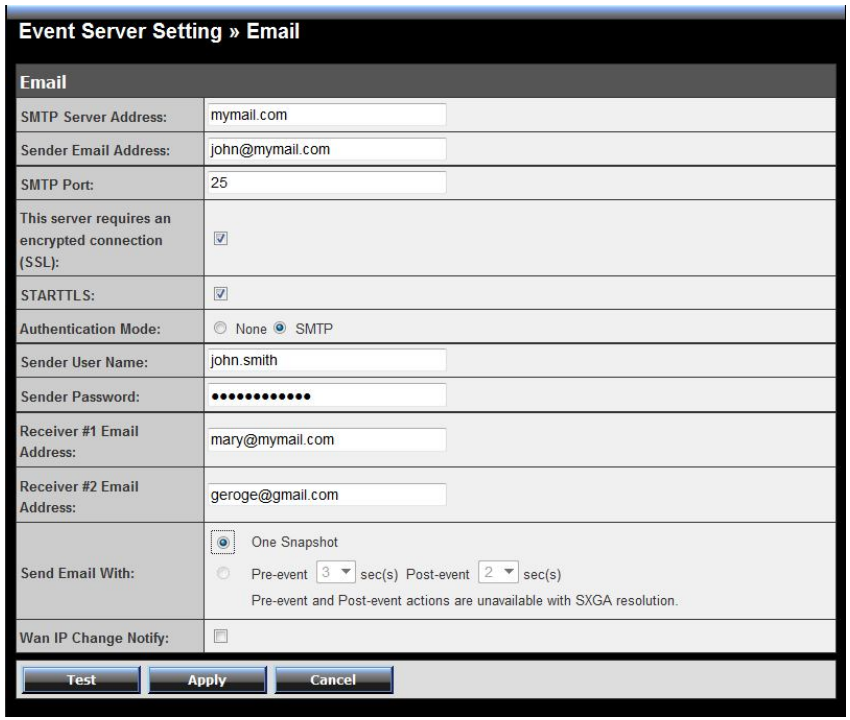
Event Server Setting >> FTP



- **FTP**
  - **Host Address:** Enter the IP address of the target FTP server.
  - **Port Number:** Enter the port number used for the FTP server.
  - **User Name:** Enter the user name to login into the FTP server.
  - **Password:** Enter the password to login into the FTP server.
  - **Directory Path:** Enter the destination folder for uploading the images. For example, test.
  - **Passive Mode:** Select the **Enable** option to enable passive mode.
  - **FTP Upload with:** Select upload to FTP with one snapshot image or a series image in pre-event/post-event time when event triggered.

NOTE: The Pre-Event or Post-Event only works when video resolution set up to 720P or lower. It will not work with SXGA resolution. Due to the network speed/environment, the camera may not be able upload all number of the images that you set.

Event Server Setting >> Email



- **Email**
  - **SMTP Server Address:** Enter the mail server address. For example, myserver.com. If you are using a free mail service (e.g. Google Gmail®, Yahoo®, Hotmail®), please enter the SMTP server address from the service provider.
  - **Sender Email Address:** Enter the email address of the user who will send the email. For example, John@myserver.com.
  - **SMTP Port**: Assign the SMTP port in the text box. The default SMPT port is 25. For the free mail service, please enter the correct port number from the service provider.
  - **SSL or STARTLLS**: If the mail server requires an encrypted connection, you should select the **SSL** option. **STARTTTLS** is an extension to plain text

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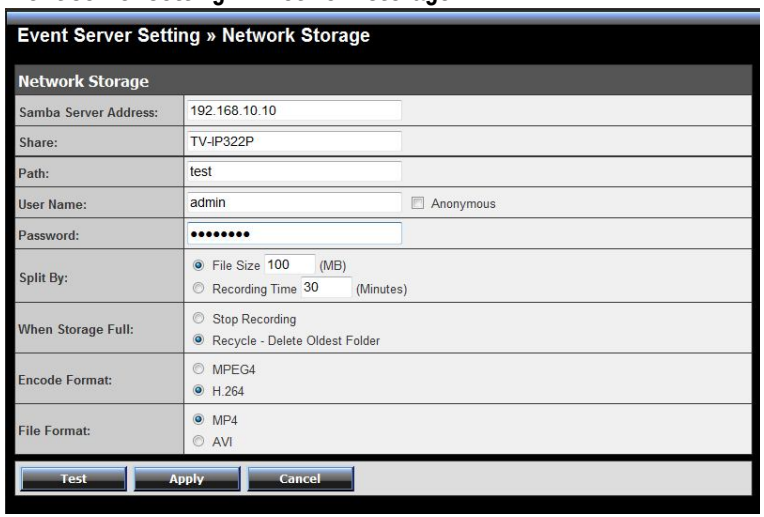
communication protocols. It offers a way to upgrade a plain text connection to an encrypted (TLS or SSL) connection.

- **Authentication Mode:** Select **None** to disable the authentication feature, or select **SMTP** and then enter the **User Name** and **Password** according to the mail server configuration.
- **Sender User Name:** Enter the user name to login the mail server.
- **Sender Password:** Enter the password to login the mail server.
- **Receiver #1 Email Address:** Enter the first email address of the user who will receive the email.
- **Receiver #2 Email Address:** Enter the second email address of the user who will receive the email.
- **Send Email With:** Set the format of the image that is to be sent by the email. You can set the format as **One Snapshot** or images containing **Pre-event** (0 ~ 3) seconds and **Post-event** (0 ~ 3) seconds.

NOTE: The Pre-Event or Post-Event only works when video resolution set up to 720P or lower. It will not work with SXGA resolution. Due to the network speed/environment, the camera may not be able upload all number of the images that you set.

- **WAN IP Change Notify:** Select the option to enable the system to notify you when the WAN IP address changed.

Event Server Setting >> Network Storage



- **Network Storage**
  - **Samba Server Address:** Enter the IP address of the Network Storage server.
  - **Share:** Assign the folder on the Network Storage server to share the files to users.
  - **Path:** Assign the path for uploading the files on the Network Storage server. For example, test.
  - **User Name:** Enter the user name to login into the Network Storage server.
  - **Password:** Enter the password to login into the Network Storage server.
  - **Split By:** When the file is too large to upload smoothly, use this option to split it by selecting **File Size** or **Recording Time**.
  - **When Storage Full:** Select **Stop Recording** or **Recycle – Delete Oldest Folder** when the storage space on the Network Storage server is full.
  - **Encode Format:** Select **MPEG4** or **H.264** as the encode format while recording.
  - **File Format:** Select **MP4** or **AVI** as the file format while recording.

NOTE The recorded video files in Network Storage are enclosed by AVI format without audio.

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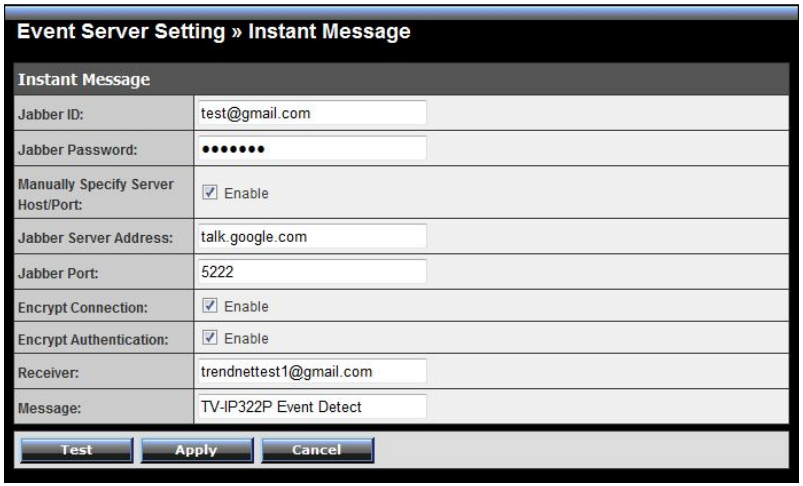
Event Server Setting >> Instant Message

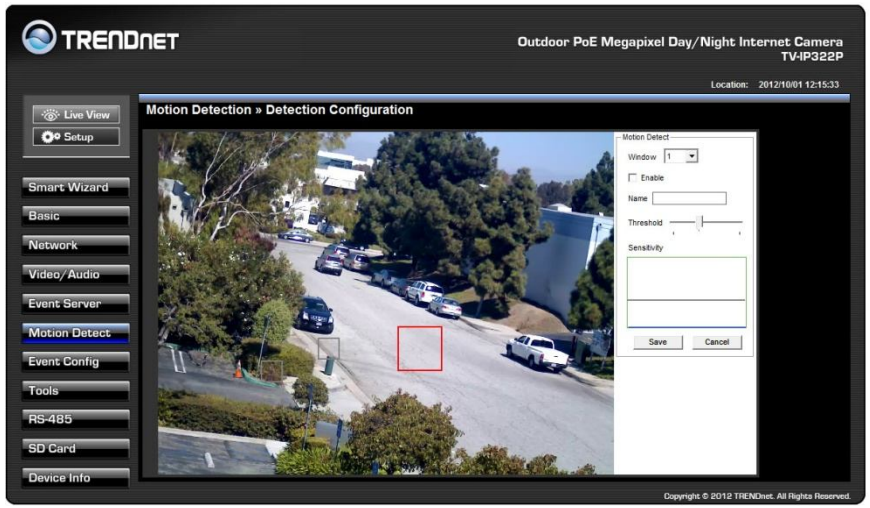


The camera supports the Jabber IM service, so that you can send an instant message once you have a Jabber account. For more information of Jabber, please visit the Jabber Website at: http://jabber.org/Main_Page. The information show above is using google talk.

- **Instant Message**
  - **Jabber ID:** Enter your user ID to login into the Jabber IM service.
  - **Jabber Password:** Enter the password to login into the Jabber IM service.
  - **Manually Specify Server Host/Port:** Select the Enable option to manually configure the Jabber server settings.
  - **Jabber Server Address:** Enter the Jabber server address manually.
  - **Jabber Port:** Assign the Jabber port manually in the text box.
  - **Encrypt Connection:** Select the **Enable** option to secure the connection.
  - **Encrypt Authentication:** Select the **Enable** option to secure the connection.
  - **Receiver:** Enter the receiver's information.
  - **Message:** Enter the message that is to be sent.

Motion Detect

The Motion Detect menu contains the command and option that allow you to enable and set up the motion detection feature of the camera. The camera provides three detecting areas.



To enable the detecting area, select **Window 1/2/3** from the pull-down list, and then select **Enable**. When the detecting area is enabled, you can use the mouse to move the detecting area and change the area coverage.

- **Name:** Assign a name to the detecting area.
- **Threshold:** Move the slide bar to adjust the level for detecting motion to record video.

NOTE Sliding the Threshold bar to the right will decrease the sensitivity of motion detection; sliding the Threshold bar to the left will increase the sensitivity of motion detection.

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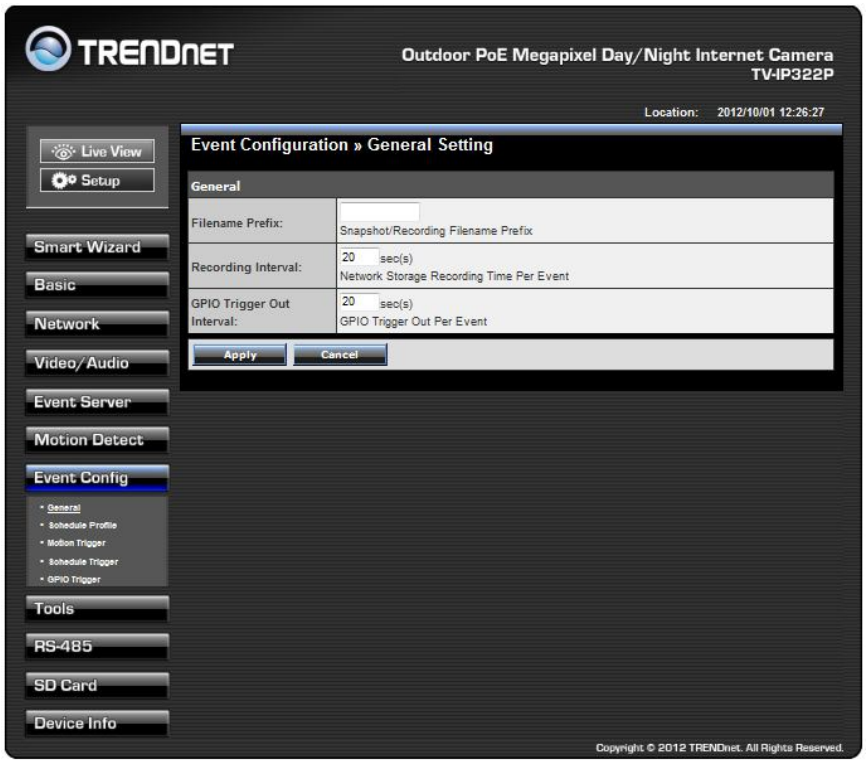
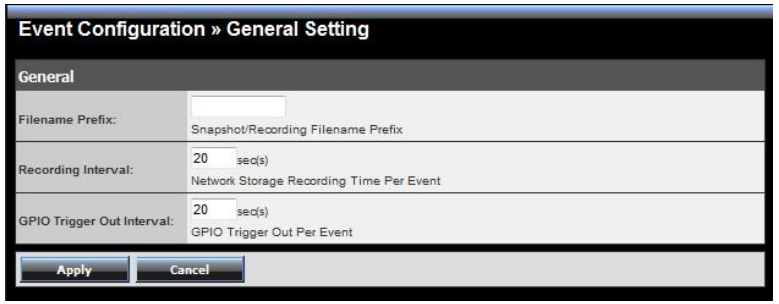
Event Config

The Event Config menu contains five sub-menus that provide the commands to configure event profiles.

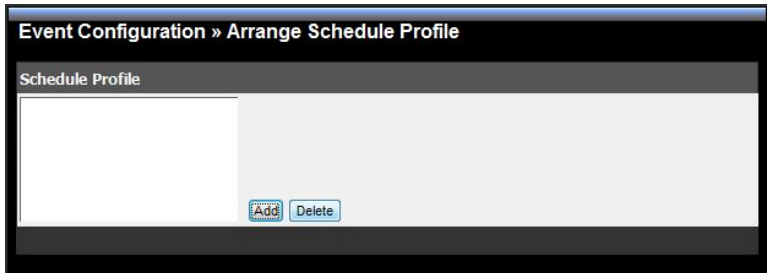


Event Configuration >> General Setting



- **General**
  - **Filename Prefix (Snapshot/Recording Subfolder):** You can assign a descriptive name for the subfolder to save the captured image/video files. Otherwise, leave this option blank to use the default setting.
  - **Recording interval (Storage Recording Time Per Event):** Limit the recording time while you are using the Network Storage solution.
  - **GPIO Trigger Out Interval (GPIO Trigger Out Retention Time Per Event):** Limit the retention time of the GPIO Trigger Out function.

Event Configuration >> Arrange Schedule Profile



- **Schedule Profile:** This sub-menu displays the scheduled profile(s). To customize the profile, click **Add** and then enter a descriptive name for the profile in the prompt dialog window. After entering the profile name, click **OK** and the profile is added to the Schedule Profiles list. To delete the profile, select the profile in the list and click **Delete**.

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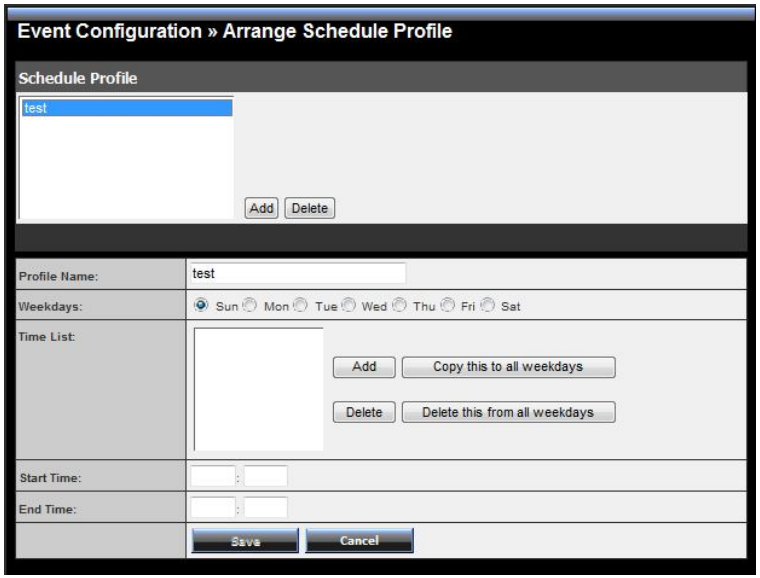
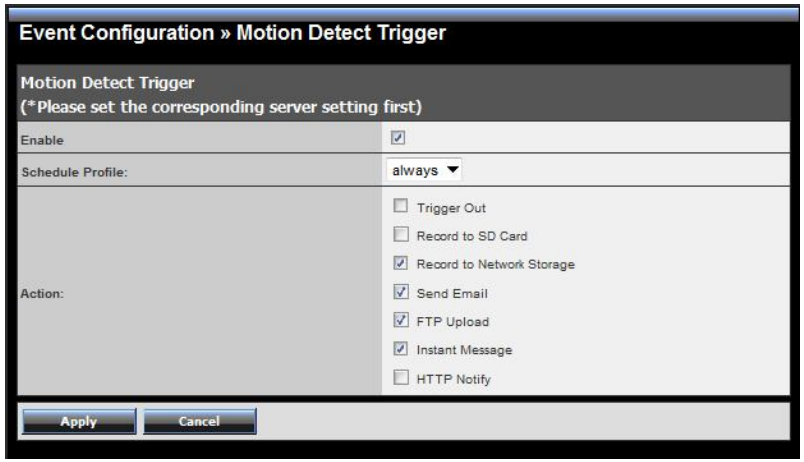


- **Profile Name:** Display the profile name that you select in the Schedule Profiles list.
- **Weekdays:** Select the weekday(s) that you want to separately assign in the schedule profile. The weekday that has been assigned will be displayed with green color.
- **Time List:** Display the time period that you have assigned within the selected weekday. To assign the same time period to every weekday, click **Copy this to all weekdays**; click **Delete this from all weekdays** to remove the selected time period from every weekday. Click Delete to remove the selected time period.
- **Start/End Time:** Enter the start and end time and then click **Add** to assign a time period within in the selected weekday.

Event Configuration >> Motion Detect Trigger



- **Motion Detect Trigger:** Select the **Enable** option to enable the trigger function of the camera, so that you can send captured images within the detecting area to the FTP server, email receiver, or the Network Storage server. You have to configure corresponding settings, such as FTP server and email server, to enable this feature. Please note that you have to configure the related settings before enabling these features.
  - **Schedule Profile:** Select a schedule profile from the pull-down list.
  - **Action:** Set the **Trigger Out** function or select the destination that the captured images will be sent to: , or **Record to SD Card**, **Record to Network Storage**, **Send Email**, **FTP Upload**, or **Instant Message**.

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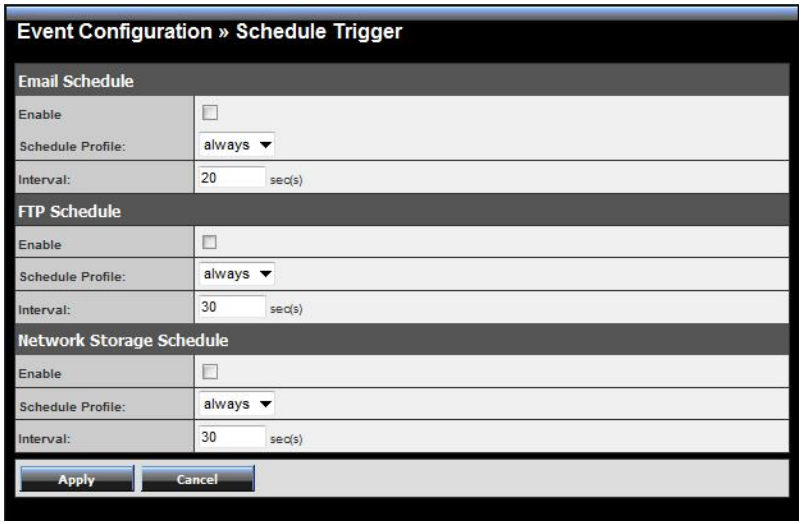
Event Configuration >> Schedule Trigger

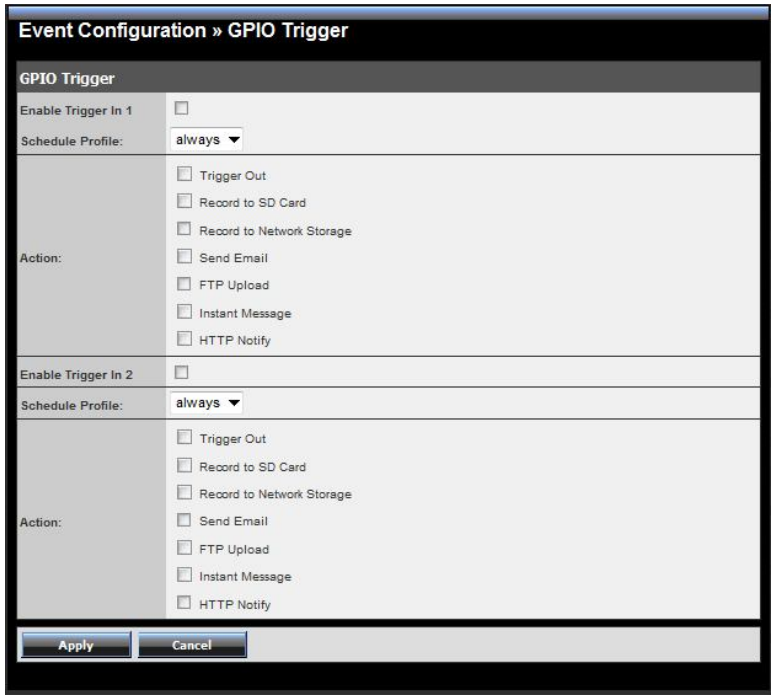


You can separately configure the schedule for trigger function of the camera by **Email**, **FTP**, or **Network Storage**. Select the **Enable** option on each item, and then select a **Schedule Profile** from the pull-down list and set the **Interval** time.

NOTE If the setting value of the **Network Storage Recording Time Per Event** option in General Setting is longer than the **Interval** time in Network Storage Schedule, the recorded file will be a continuous video clip.

For example, if you set the **Network Storage Recording Time Per Event** as 10 seconds and the **Interval** as 5 seconds, recorded file becomes a non-stop video clip because the camera will record a 10-second video clip every 5 seconds.

Event Configuration >> GPIO Trigger



- **GPIO Trigger:** Select the **Enable Trigger In 1/2** option to enable the GPIO trigger function of the camera, so that you can set Trigger Out function or send captured images within the detecting area to the SD card, FTP server, email receiver, Network Storage server, or send an instant message. Event server has to be configured prior to using the functions.
  - **Schedule Profile:** Select a schedule profile from the pull-down list.
  - **Action:** Set the **Trigger Out** function or select the destination that the captured images will be sent to: **Record to SD Card**, **Record to Network Storage**, **Send Email**, **FTP Upload**, or **Instant Message**.

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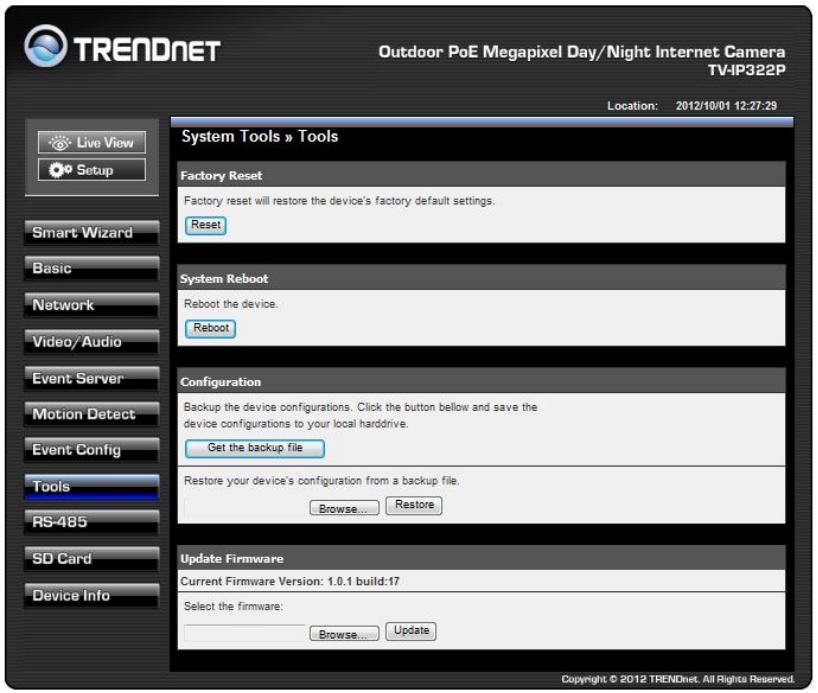
Tools

The Tools menu provides the commands that allow you to restart or reset the camera. You can also backup and restore your configuration, and upgrade the firmware for the camera.



- **Factory Reset:** Click **Reset** button to restore all factory default settings for the camera. You can also do the physical reset by press the reset button on the camera. Please refer to trouble shooting section question 2 for more detail.
- **System Reboot:** Click **Reboot** to restart the camera just like turning the device off and on. The camera configuration will be retained after rebooting.
- **Configuration:** You can save your camera configuration as a backup file on your computer. Whenever you want to resume the original settings, you can restore them by retrieving the backup file.
  - **Backup:** Click **Get the backup file** to save the current configuration of the camera.
  - **Restore:** Click **Browse** to locate the backup file and then click **Restore**.
- **Update Firmware:** You can upgrade the firmware for your camera once you obtained a latest version of firmware.
  - **Current Firmware Version:** This item displays the current firmware version.
  - **Select the firmware:** Click **Browse** to locate the backup file and then click **Update**.

NOTE Make sure to keep the camera connected to the power source during the process of upgrading firmware. Otherwise, the camera might be damaged because of failure of upgrading firmware.

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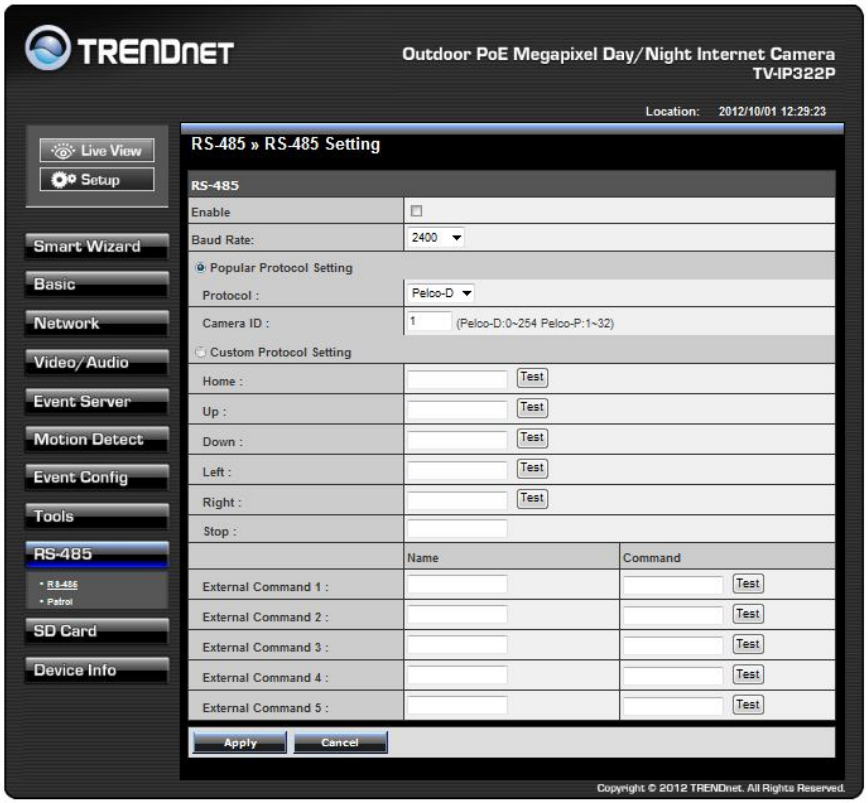
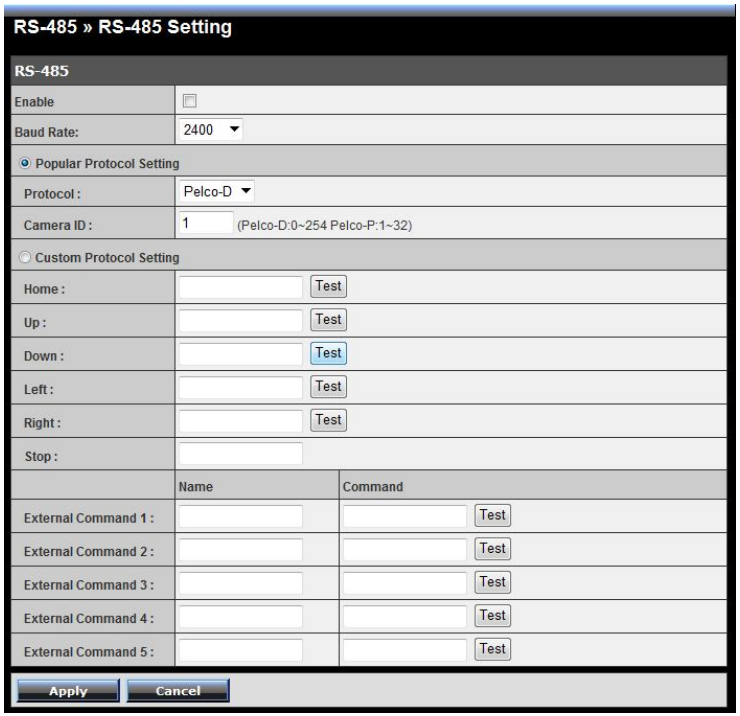
RS-485

The RS-485 menu provides the control settings for external device through the I/O port.



RS-485 >> RS-485 Setting



Select the **Enable** option and complete the required configuration to use the RS-485 function of the device.

- **Popular Protocol Setting:** Select a **Protocol** (Pelco-D or Pelco-P) and then select a **Camera ID**.
- **Custom Protocol Setting:** Select this option to configure the commands protocol manually. You can click **Test** to test each command that you have assigned. In the **Name** and **Command** string boxes, you can customize more buttons for your needs. Please note that the setting values in the **Command** string boxes should be from the connected external device (please refer to the manual of the connected device).

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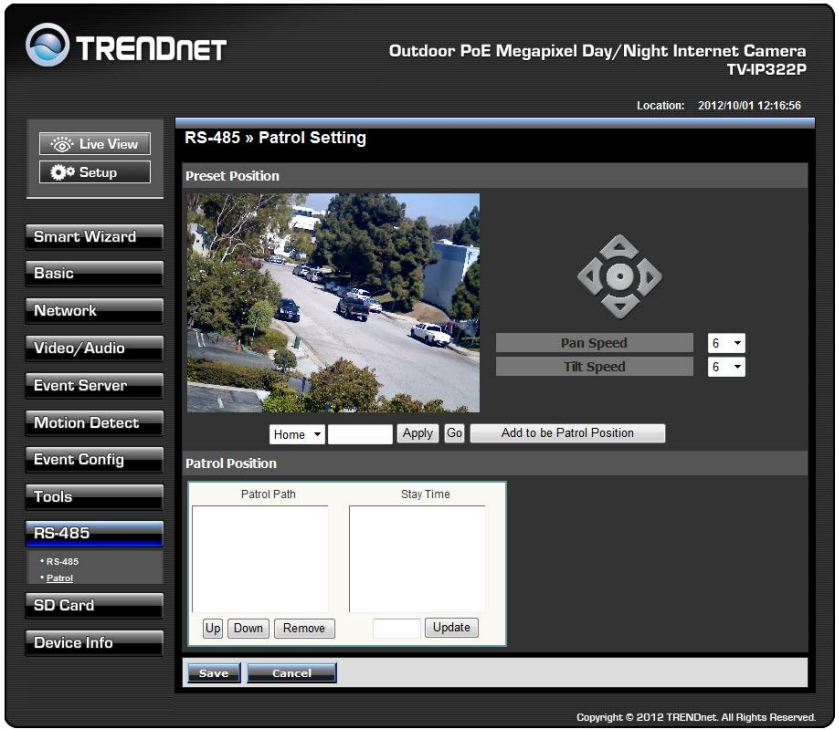
RS-485 >> Patrol



The **Patrol** function provides the patrol control settings for the connected camera.

- **Preset Position**

  To set the preset position for the connected camera:

  1. Use the Navigation buttons to move the camera lens to the desired position.
  2. Select a Position number (Home, 2~32) from the **Preset Position** pull-down list.
  3. Enter the descriptive name for the location in the text box.
  4. Click **Apply**.
     - **Pan Speed:** Adjust the moving speed (1 ~ 10) while panning the lens.
     - **Tilt Speed:** Adjust the moving speed (1 ~ 10) while tilting the lens.
     - **Zoom Speed:** Adjust the speed (1 ~ 10) while zooming the lens.
     - **Focus Speed:** Adjust the speed (1 ~ 10) while focusing the lens.
     - **Zoom In/Zoom Out:** Click to zoom in/out the live view image.
     - **Focus Far/Focus Near:** Click to adjust the focus by far/near.
     -

- **Patrol Position**

  This field allows you to set the positions for camera's patrolling:

  1. Select a preset position from the **Preset Position** pull-down list, and then click **Add to be Patrol Position**. The preset position will be added to the **Patrol Path** list.
  2. From the **Patrol Path** list, you can change the patrolling order by selecting a position and clicking **Up** or **Down**. You can also delete a position by clicking **Remove**.
  3. You can change the stay time for each position when the camera is patrolling. Select a position in the Patrol Path list and then enter a time setting in the text box below the Stay Time list. Click **Update** to save the setting. The **Stay Time** list displays the current setting for each position.
  4. When done, click **Save**.

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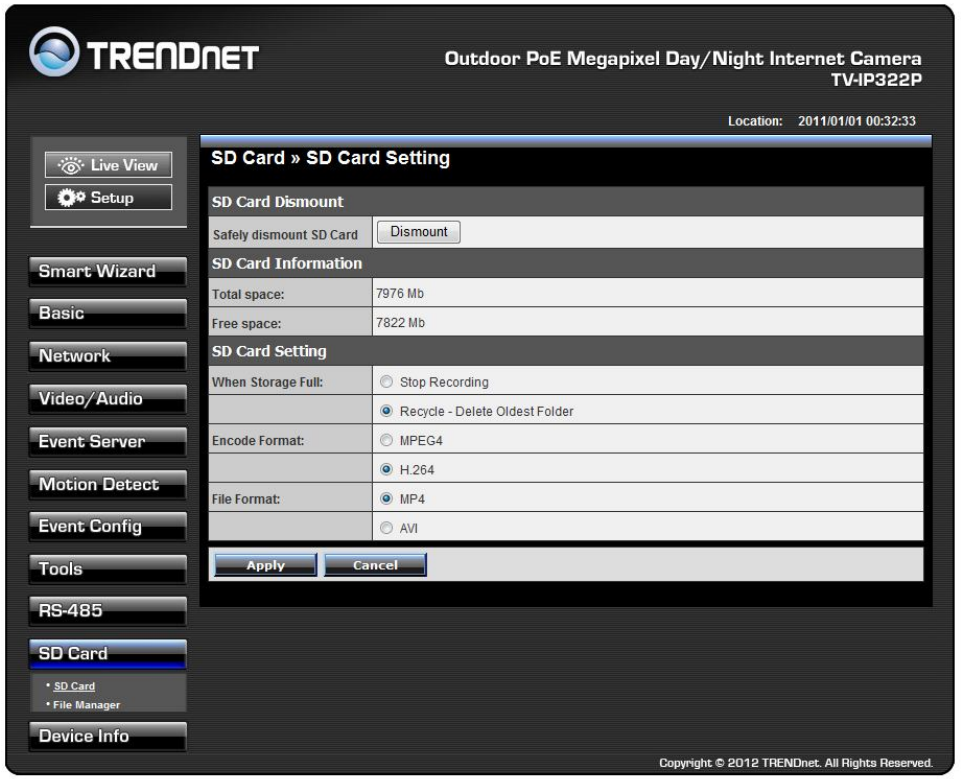
SD Card

The SD Card menu allows you to set the SD card function installed in the camera.



SD Card >> SD Card Setting

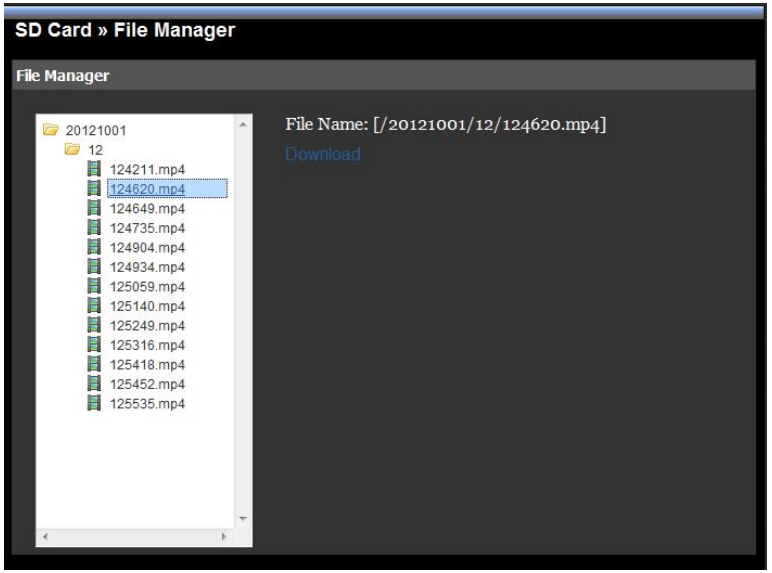
- **SD Card Dismount:** Click **Dismount** to safely remove the SD card that is installed in the camera.

  Note: You must disable the event trigger in order to dismount the SD Card.

- **SD Card Information:** Displays the information of the installed SD card, including the **Total space** and **Free space**.
- **SD Card Setting**
  - **When Storage Full:** Select **Stop Recording** or **Recycle – Delete Oldest Folder** when the storage space on the SD card is full.
  - **Encode Format:** Select **MPEG4** or **H.264** as the encode format while recording.
  - **File Format:** Select **MP4** or **AVI** as the file format while recording.

SD Card >> File Manager

The **File Manager** menu allows you to download files from the SD card. Select the desire file and click the **Download** button to download the file.



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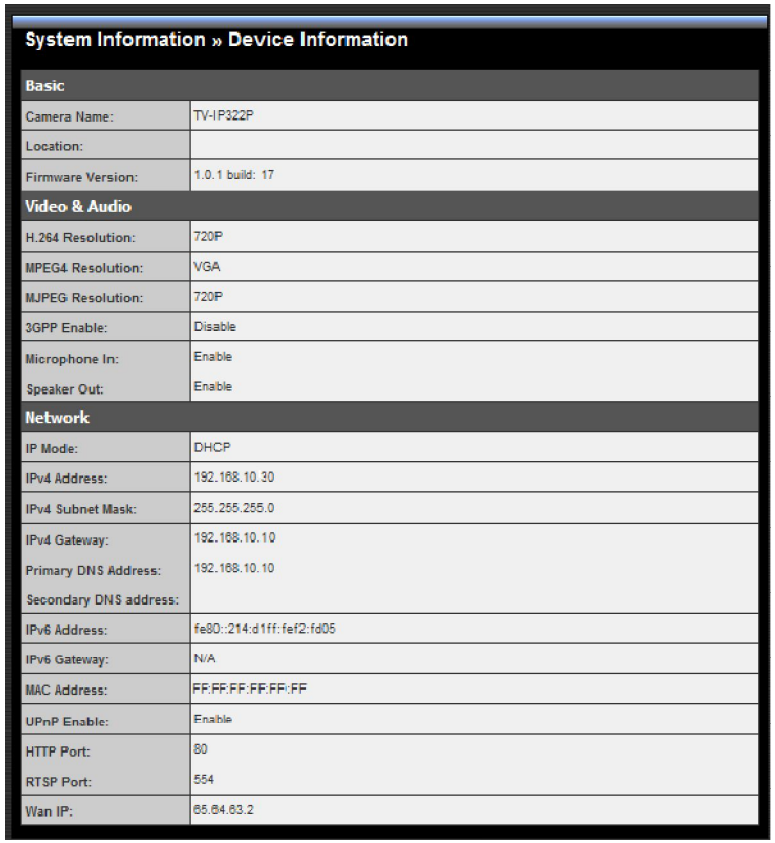
Device Info

The Information menu displays the current configuration and events log of the camera.

Device Info >> Device Info

Display the Basic, Video & Audio, and Network settings of the camera.



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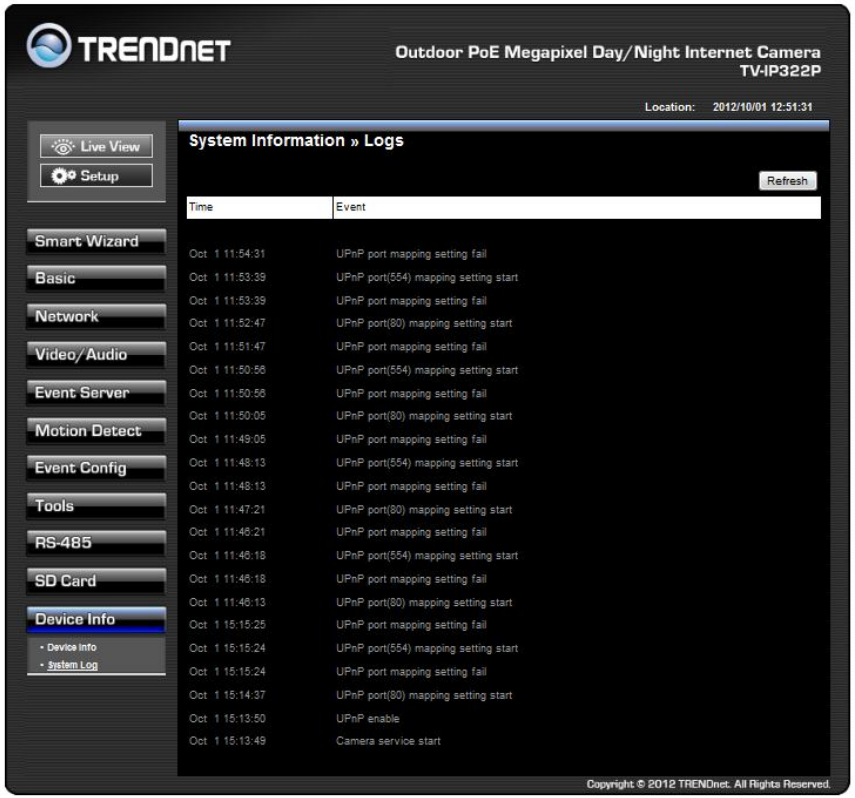
Device Info >> System Logs

The Logs table displays the events log recorded by the system.


TRENDnet
Outdoor PoE Megapixel Day/Night Internet Camera
TV-IP322P
Location: 2012/10/01 12:51:31
Live View
Setup
System Information » Logs
Refresh
Time
Event
Smart Wizard
Basic
Network
Video/Audio
Event Server
Motion Detect
Event Config
Tools
RS-485
SD Card
Device Info
Device Info
System Log
Oct 1 11:54:31 UPnP port mapping setting fail
Oct 1 11:53:39 UPnP port(554) mapping setting start
Oct 1 11:53:39 UPnP port mapping setting fail
Oct 1 11:52:47 UPnP port(80) mapping setting start
Oct 1 11:51:47 UPnP port mapping setting fail
Oct 1 11:50:56 UPnP port(554) mapping setting start
Oct 1 11:50:56 UPnP port mapping setting fail
Oct 1 11:50:05 UPnP port(80) mapping setting start
Oct 1 11:49:05 UPnP port mapping setting fail
Oct 1 11:48:13 UPnP port(554) mapping setting start
Oct 1 11:48:13 UPnP port mapping setting fail
Oct 1 11:47:21 UPnP port(80) mapping setting start
Oct 1 11:46:21 UPnP port mapping setting fail
Oct 1 11:46:18 UPnP port(554) mapping setting start
Oct 1 11:46:18 UPnP port mapping setting fail
Oct 1 11:46:13 UPnP port(80) mapping setting start
Oct 1 15:15:25 UPnP port mapping setting fail
Oct 1 15:15:24 UPnP port(554) mapping setting start
Oct 1 15:15:24 UPnP port mapping setting fail
Oct 1 15:14:37 UPnP port(80) mapping setting start
Oct 1 15:13:50 UPnP enable
Oct 1 15:13:49 Camera service start
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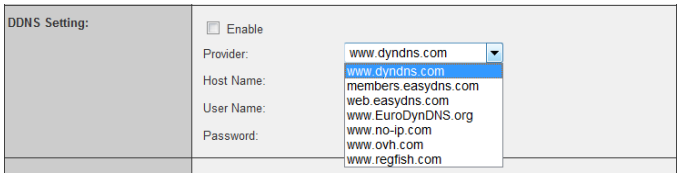
How to setup/access the camera behind a Router

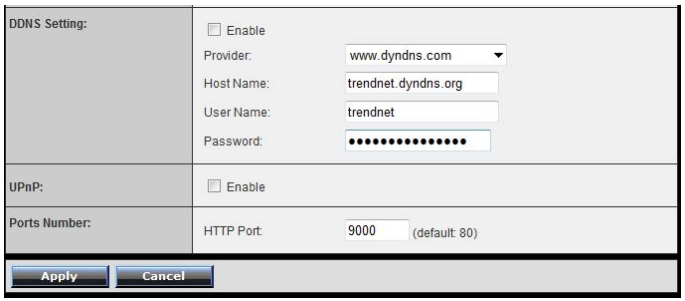
You can either setup the Dynamic DNS connection via camera itself or your home router. An account from any of the listed DDNS providers is required prior to this operation.

Configure DDNS on your Camera

1. Go to Camera's **DDNS Setting** page, click **Enable** to activate the feature. Then select a DDNS provider from the list.



2. Enter your DDNS's the Host Name, User Name and Password.



3. In the **Port Number** section, assign an HTTP port of the camera. The default HTTP Port on the camera is 80. The example shows above is using port number 9000.

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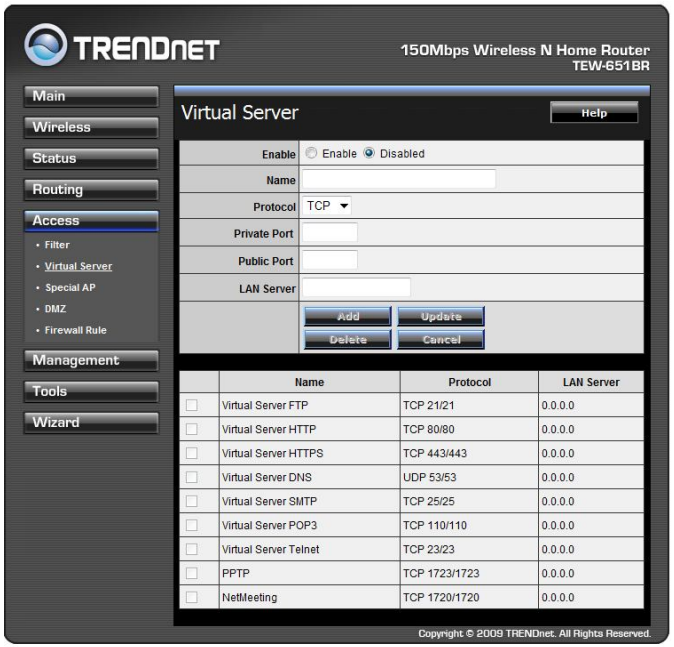
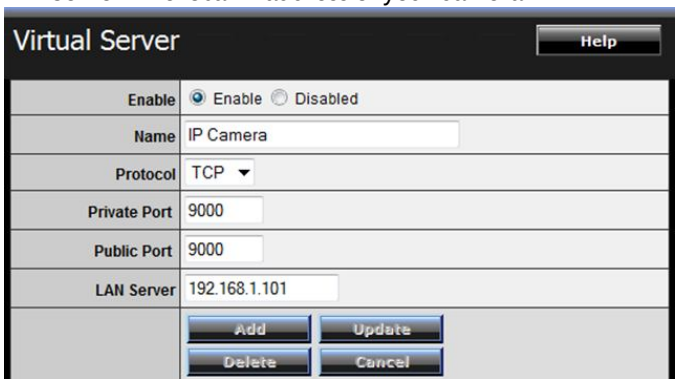
4. Open another web browser and go to your Router's Web Configuration page. (In the example, TRENDnet's TEW-651BR Wireless N router is used)



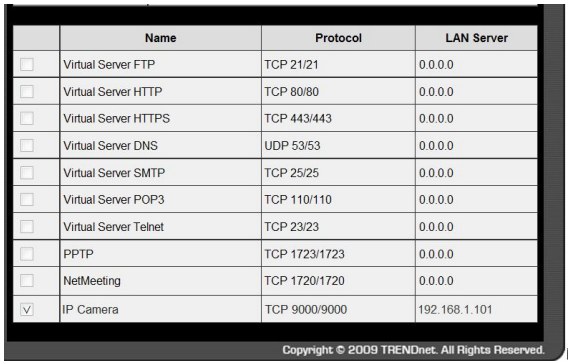
5. Go to **Virtual Server*** section and create a new entry.

Enable: Click **Enable**
Name: Enter the application name (eg. CameraName)
Protocol: Select **TCP**
Private Port: The HTTP port that you assign on your Camera.
Public Port: The port used on remote side to access to your Camera.
LAN Server: The local IP address of your Camera.



Then click **Add** to add the application.

* Please refer to your router's user's manual for detail **Virtual Server** setting. Some router might use **Port Forwarding** or **Special applications** for this function. The setup steps should be very similar.



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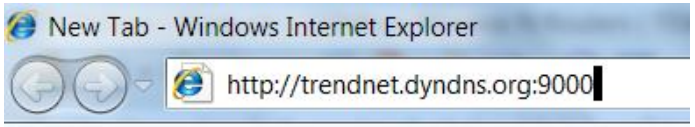
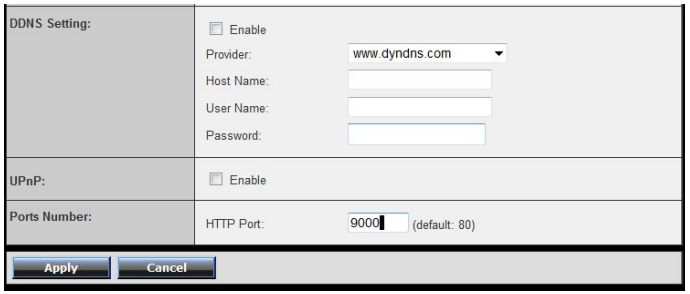
6. Open another web browser and enter your DDNS domain and camera's port number.
   http://yourDomainName:PortNumber



7. Camera's login page will appear.

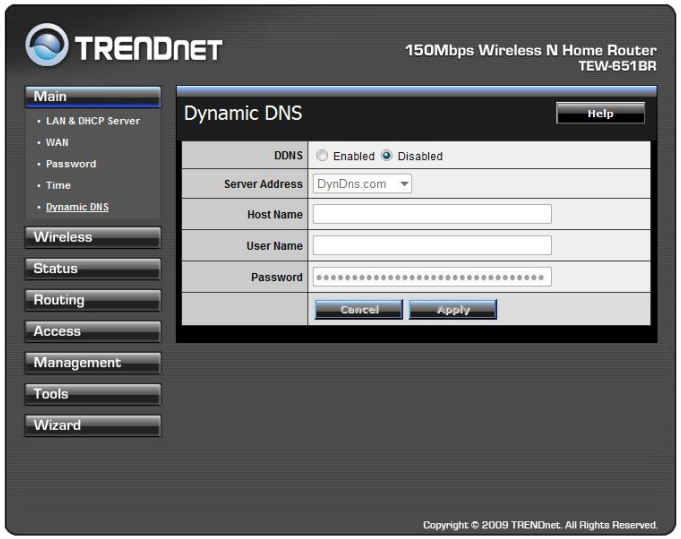
Configure DDNS on your router

1. Go to Camera's **DDNS → Ports Number** section, assign a HTTP port for your camera and click **Apply**.



2. Login to your router's web configuration page.

3. Find the **Dynamic DNS** configuration section.



4. Enable DDNS, fill out the following information and then click **Apply**.

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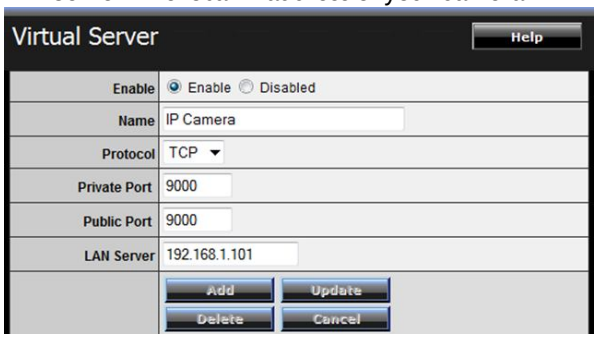
5. Go to **Virtual Server*** section and create a new entry.
   Enable: Click **Enable**
   Name: Enter the application name (eg. Camera Name)
   Protocol: Select **TCP**
   Private Port: The HTTP port that you assign on your Camera.
   Public Port: The port used on remote side to access to your Camera.
   LAN Server: The local IP address of your Camera.



   Click **Add** to add the application.

   * Please refer to your router's user's manual for detail **Virtual Server** setting. Some router might use **Port Forwarding** or **Special applications** for this function. The setup steps should be very similar.

6. Open another web browser and enter your DDNS domain and camera's port number.
   http://yourDomainName:PortNumber

7. The camera login page will appear.

Technical Specifications

Camera	
General	Sensor: 1/3" Megapixels color CMOS sensor Resolution: 1280 x 1024 pixels Board Lens Focal Length: 12mm Aperture (F/No): F1.8 Minimum illumination: 0 Lux (Night vision) Viewing Angle : • Diagonal: 28.5 degree • Horizontal: 22.7 degree • Vertical : 17.2 degree
Image & Video	Compression: H.264, MPEG-4, and MJPEG Exposure/white balance/gain control : automatic Built-in ICR
Audio	External microphone in Sensitivity: -48dB +/- 3dB Frequency:50~16000Hz S/N: >60dB Format: PCM/AMR
Pan/Tilt/Zoom	Protocol: Pelco D, Pelco P 32 presets Auto Patrol
GPIO	Ground, GPIO in/out, RS485, 12V DC, 24V AC
SD Slot	Supports SD/SDHC (up to 32GB)
Hardware	
Network	IEEE 802.3u 10/100Mbps Fast Ethernet IEEE 802.3af PoE

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LED	Power, Link
IR Wavelength	850nm
Reset Button	Reboot or restore to factory default
Power Over Ethernet	PoE Power on RJ-45 pin 3,6 for Power+ and pin 1,2 for Power-
Power Consumption	9.5 Watts max.
Power	Input: 100 ~ 240V AC , 0.5A, 50~60Hz Output: 12VDC 1.5A external power adapter (for non-PoE installations)
Dimension	235 x 110 x 89 mm (9.3 x 4.3 x 3.5 in.)
Weight	1.5 kg (3.2 lb)
Operating Condition	Temperature : -20°C ~ 60°C (-4°F ~ 140°F) Wind Velocity: 130km/hr Humidity: Max. 90% (non-condensing)
Certifications	CE, FCC, IP66
Requirement	
Management Interface	Internet Explorer 6.0 or above
To Run SecurView Pro	Windows 7 (32/64-bit), Vista (32/64-bit), XP (32/64-bit)
SecurView Pro	Channel: supports up to 32 cameras Record/Playback/Motion Detection
Network Protocols	TCP/IP, IPv4, IPv6, UDP, ICMP, DHCP, NTP, DNS, DDNS, SMTP, FTP, HTTP, HTTPs, Samba, PPPoE, UPnP, Bonjour, RTP, RTSP, and RTCP
Management	
Remote	Remote management supported

Backup / Restore	Save/retrieve configuration files
Settings	
Image	Brightness, saturation, sharpness, and mirror (horizontal/vertical)
Video	Encoding type: H.264, MPEG-4, MJPEG Compression: 5 levels Resolution/Frame Rate: SXGA (1280 x 1024) up to 15fps VGA (640x480) up to 30fps QVGA (320x240) up to 30fps QQVGA (160x120) up to 30fps Multi-Stream H.264: SXGA, VGA, QVGA, QQVGA MPEG4: VGA, QVGA, QQVGA MJPEG: SXGA, VGA, QVGA, QQVGA
Recording	Recording type: continuous, schedule, or motion detection with software
Event Management	Event trigger: motion, GPIO, schedule Store video file to SD card Send Instant message to Jabber client via Jabber server
QoS	DSCP
Port Settings	HTTP port: 80 (default)
Digital Zoom	3x
Dynamic DNS	Yes
Time	Synchronize with NTP server or set time/date manually
SMTP	SMTP mail supported up to 2 destination accounts
System Log	100 entries (max.)

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Troubleshooting

1. **I inserted the Utility CD-ROM into my computer's CD-ROM Drive but the installation menu does not appear automatically. What should I do?**

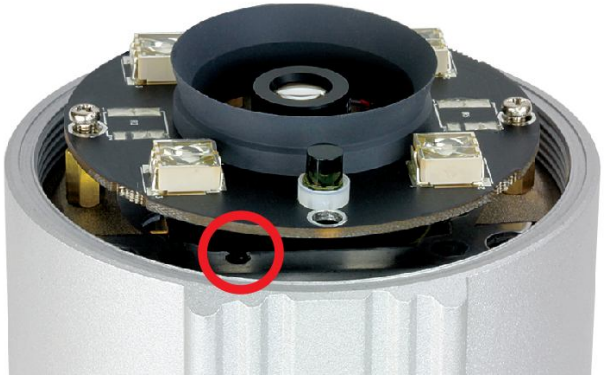
   Windows 7
   If the installation menu does not appear automatically, click on the Windows Icon on the bottom left hand corner of the screen, click the "Search programs and files" box, and type D:\autorun.exe, where "D" in "D:\autorun.exe" is the letter assigned to your CD-ROM Drive, and then press the ENTER key on your keyboard .

   Windows Vista
   If the installation menu does not appear automatically, click Start, click the Start Search box, and type D:\autorun.exe where "D" in "D:\autorun.exe" is the letter assigned to your CD-ROM Drive, and then press the ENTER key on your keyboard.

   Windows XP
   If the window does not appear automatically, click Start, click Run and type D:\autorun.exe where "D" in "D:\autorun.exe" is the letter assigned to your CD-ROM Drive, and then press the ENTER key on your keyboard.

2. **IP Setup is unable to detect my camera. What should I do?**

   a. Verify that you have followed all the steps in Section 2: Hardware Installation.
   b. Disable any software firewall programs such as ZoneAlarm or Norton Internet Security. If you are using Windows 7, Vista or XP, disable the built in firewall.
   c. Click on Search in IPSetup.
   d. Reset the IP Camera
      - Remove the front cover
      - Take a pen and press the reset button for 10 seconds, then let go.



3. **I do not have a DHCP server or DHCP is disable on my network and I am unable to configure the TV-IP322P. What should I do?**

   a. Go to the TCP/IP settings on your computer and assign a static IP address on your computer's network adapter in the subnet of 192.168.10.x. Since the default IP address of the TV-IP322P is 192.168.10.30, do not assign a static IP address of 192.168.10.30 on your computer's network adapter.
   b. Open Internet Explorer and enter http://192.168.10.30 into the address bar.

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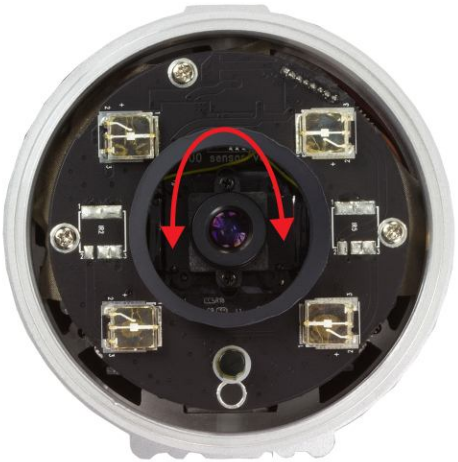
4. **The image is blurry. How can I adjust the focus on the IP camera?**

   Open the front cover of the TV-IP322P. Adjust the lens focus by turning the lens ring slowly in either clockwise or counter clockwise direction.

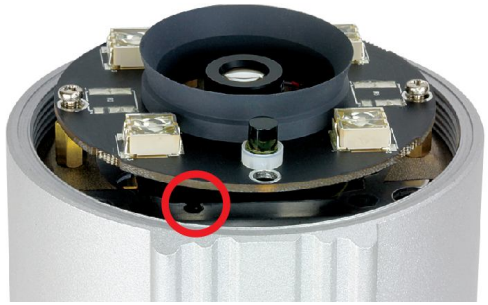


5. **When I click on Live View the image does not load?**

   a. Make sure that you are using a browser that supports ActiveX.
   b. Make sure that ActiveX is installed.

6. **I forgot my password. What should I do?**

   Open the front cover of the TV-IP322P. Located the reset button and press it for 10 seconds and let go. Wait for 60 seconds for camera rebooting then login to IP camera.



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TV-IP322P – 3 Years Limited Warranty

AC/DC Power Adapter, Cooling Fan, and Power Supply carry 1 year warranty.

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